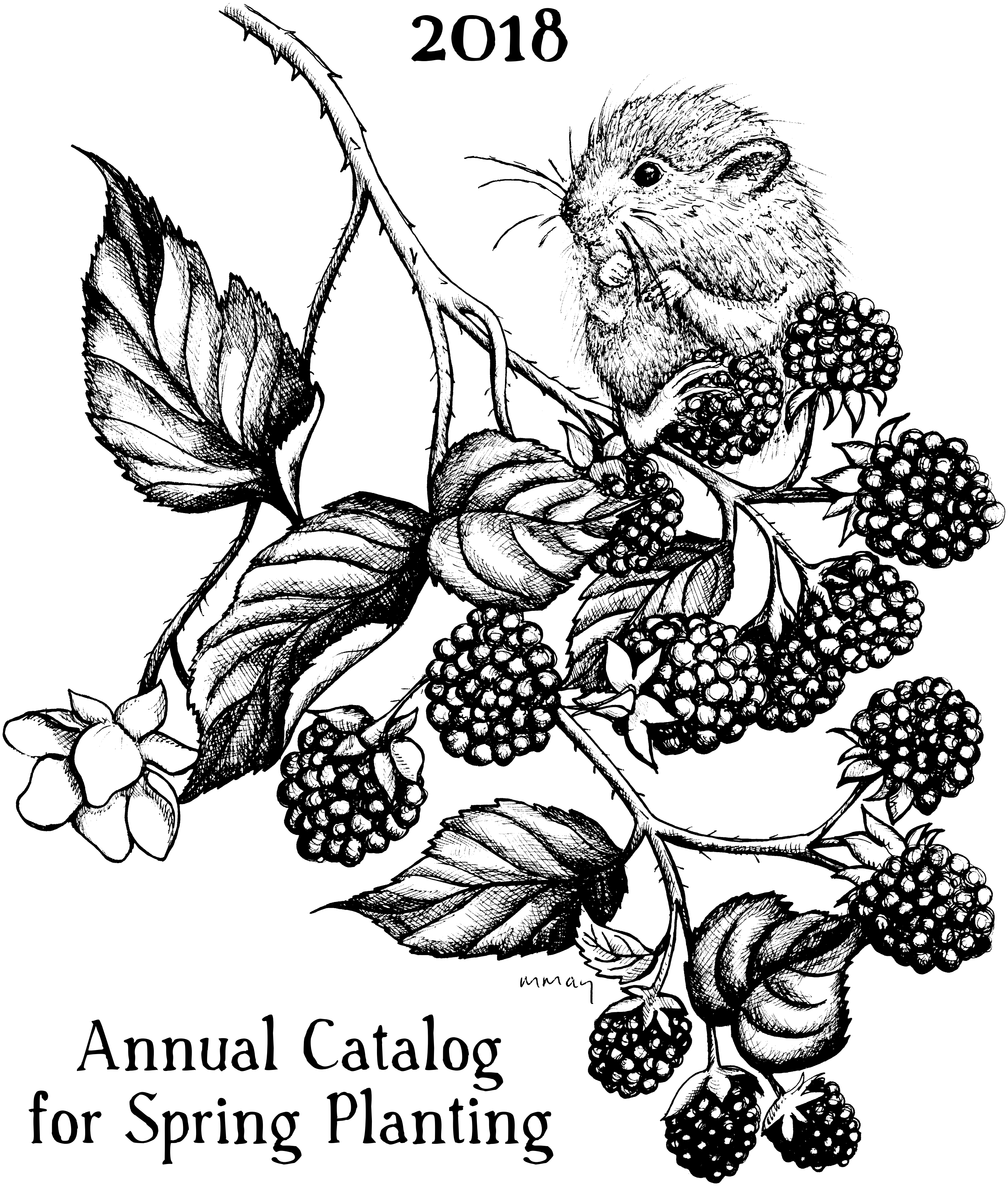
FEDCO TREES

2018

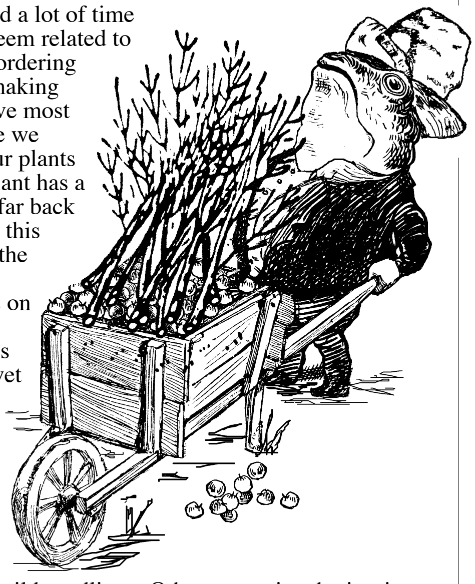


Annual Catalog for Spring Planting

FEDCO TREES 2018

Welcome to Fedco Trees' 34th annual order. Our goal is to provide the hardiest and healthiest plants available for cold climates, while supporting plant diversity, small-scale local agriculture and a fair, cooperative and responsible workplace. Our no-frills operation helps keep plants affordable. Consider ordering in a group with coworkers, friends or neighbors to further minimize your costs. Please note our discount structure for large orders, our discount deadline, and the "Small & Light" shipping option for those who desire only items that don't require a giant box.

Plants on the Move



At Fedco Trees, we spend a lot of time doing things that don't seem related to the plants we offer, like ordering boxes for shipping and making budgets. But what we love most about our jobs is the time we spend getting to know our plants in the landscape. Each plant has a story to tell that reaches far back beyond its appearance in this catalog. Roots spread in the secret darkness underground; seeds hitch rides on the wind or travel in the belly of a mouse; cuttings are carefully packed in wet paper and stuffed in a knapsack. By one mode or another, plants are on the move.

Before they became famous, some of these plants were kicking around in the woods as wild seedlings. Others were incubating in a university laboratory, awaiting hand pollination by a hybridizer trying to cross two beloved plants that might yield one with the best qualities of both. At the beginning of our plant descriptions, we list the technical origins of the plant, if it has one. This might include the parent plants and the year or location where it was introduced. If a plant is from the wild, we note its history to the best of our knowledge. Someone found and admired those seedlings, so they became selections and were replicated by grafting or cuttings that remain unchanged from the original plant. Trace back far enough and you'll find that each domesticated cultivar in the world has a wild specimen in its history. Every named pear was once a seedling someone fell in love with. Your favorite apple may have started out as a shoot that grew from a pile of horse dung on a homestead abandoned long ago.

We dabble in history as we dig up the dirt on any particular apple or elderberry or lilac. Where did this one originate? Who found that one and decided that it should be propagated and named? In this catalog, we pay a small tribute to the breeders, explorers, collectors, preservationists, farmers, hobbyists, home gardeners as well as the animals and the elements that propagate plants everywhere. Some are spreading genetic diversity around the globe, keeping the gene pool wide, and others are preserving pockets of genetics before they vanish from the planet. Years of their dedicated, patient observation resulted in many of the varieties we are so pleased to offer.

We hope this catalog will whet your appetite for knowing the plants a little bit better and the forces at work that brought them to the landscape in their current forms.

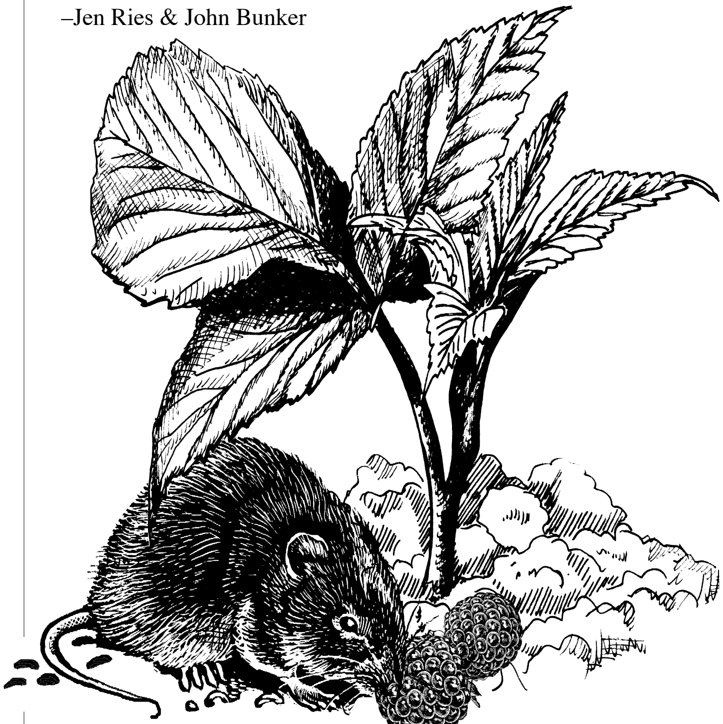
Each year we vary our plant selections. We offer most of the old favorites every year and rotate through dozens of new offerings. You'll find new fruit trees, ornamentals and perennials throughout the catalog. You can still become a **MOFGA tree steward** (page 14) by purchasing a rare historic apple tree.

If you're running a large orcharding operation, ask us about custom grafted bench grafts. This option provides large quantities of trees at an affordable rate.

If you have questions or concerns about your order, please contact us. We don't have a huge staff so if we don't respond quickly, don't hesitate to remind us; we are in business to serve you. If you haven't already, check out our Seeds and Bulb catalogs. If you enjoy this one, we're pretty sure you'll like those, too.

We invite you to share your experiences growing plants with us. Many of our selections result from your suggestions. If you know of something growing near you that we should be offering, or if you are interested in growing for us, please write to us. We welcome your comments, suggestions, recipes, anecdotes and ideas.

–Jen Ries & John Bunker



John Bunker, Lauren Cormier and Jen Ries write tree and shrub descriptions. Laura Childs writes perennial and bulb descriptions. Elisabeth Benjamin edits with help from Susan Kiralis and Emily Skrobis. Joanna Linden proofreads. Laura Childs, Gene Frey, Alicia Letteney and Melissa May do layout.

contact us: questions@fedcoseeds.com or 207-426-9900

Fedco Trees Guarantee Policy

Please inspect your order upon receipt and notify us immediately if something is missing or incorrect. Occasionally, plants incur damage during shipping. If limbs or tops are broken, prune to the next good bud. The plant will do fine. We guarantee to ship you a plant that is healthy, will leaf out, and is true to name. We expect that you will care for the plant from the moment it arrives, plant it in a timely fashion, water it (about 1" per week after bud swell) and protect it (see pp. 67-70.) Because we have no control over growing conditions such as weather, soil, cultural practices, pests, wildlife, or weed whackers, we cannot guarantee a plant's survival past leaf break. Inevitably, some plants die through no fault of yours or ours. If a plant dies during the first growing season, contact us and we will work with you to determine what went wrong. If you see no sign of life, scratch the outer bark with your fingernail. If the inner bark is green, the tree is still alive. Some plants take longer than others to break dormancy, so you may need to be patient. If you have thoroughly cared for the plant and it dies, we will refund the cost of the plant. If you prefer a replacement, we may ask you to pay for the shipping. In some cases, we may choose to split the refund with you. We are partners in the endeavor of filling the planet with plants and we want you to succeed. Don't hesitate to contact us and we'll do our best to troubleshoot your plant problems. **Claims must be made no later than July 31st of the year the plant was received.**

We limit our liability in all instances to the purchase price. The liability of Fedco Seeds, Inc., for breach of warranty, or any loss or damages arising out of the purchase or use of our products, including loss or damages resulting from any negligence whatsoever on our part, or strict liability in tort, shall be limited to the purchase price. By acceptance of the merchandise, the buyer acknowledges that the limitations and disclaimers herein described are conditions of sale, and that they constitute the entire agreement between the parties regarding any warranty or liability. Failure to assert claims within the aforementioned time frame renders this warranty null and void.

For complete **Ordering Instructions**, see page 34.

- Order online at **fedcoseeds.com** (click on Fedco Trees). You can also check product availability and see color photos of most of our trees, shrubs and perennials.
- **Volume discounts**! See the order form (p. 35) for details.
- **Group ordering:** Save on shipping and enjoy volume discounts by ordering with friends. Learn more on p. 34.
- **Shipping:** We ship most orders via UPS starting around March 30. For special shipping options, see p. 34.
- **Pickups:** If you're nearby, come get your order at our warehouse.

Important dates & deadlines

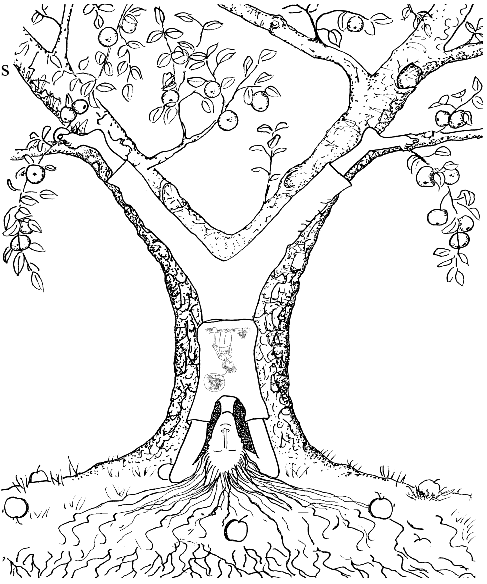
- **Volume discount deadline**, Friday, **January 19**, 2018
- **Ordering deadline** (except scionwood), Friday, **March 9**
- **Shipping** by UPS starts around March 30.

- **Scionwood order deadline**, Friday, **February 16**
- **Shipment of scionwood** & rootstock starts around March 12.

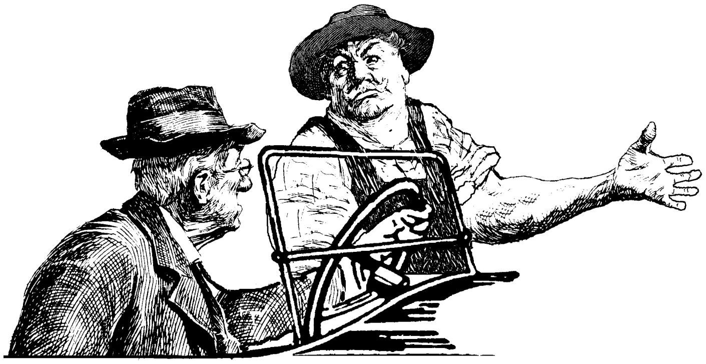
- **Order pickup** at our Tree Sale, Fri.–Sat., **April 27–28**, at our Hinckley Road warehouse in Clinton, Maine.
- **Public Tree Sale**, Fri.–Sat., **May 4–5**. Sale open to the public; orders still available for pickup. **Sale hours 9:00 to 3:00 each day.**
- **Early pickup** at our warehouse before the sale, Tues.–Thurs., April 24–26, from 9–3. You will *not* be able to shop. Less fun, shorter lines.

New for 2018

- New Fruits, Berries, Grapes & Hops
- New Orchard Companion Collections
- Experimental Hybrid Hazel
- Horse Chestnut
- Sweet Birch
- Eastern Hophornbeam
- White Oak
- Chestnut Oak
- White Spruce
- Carolina Allspice
- Honeyberries
- Fragrant Sumac
- Sunrise Sunset Rose
- Bridalwreath Spirea
- Almond Agaricus Mushroom
- Awesome Astilbe Mixes
- Willow-leaf Bluestar
- Hens & Chicks Mix
- Yellow Coneflower
- New Crabapples!
- New Heathers!
- New Lingonberries!
- New Perennials!



Our Planting Guide is incorporated into the catalog. **Save your catalog** for planting and cultural instructions. The catalog is also available online.



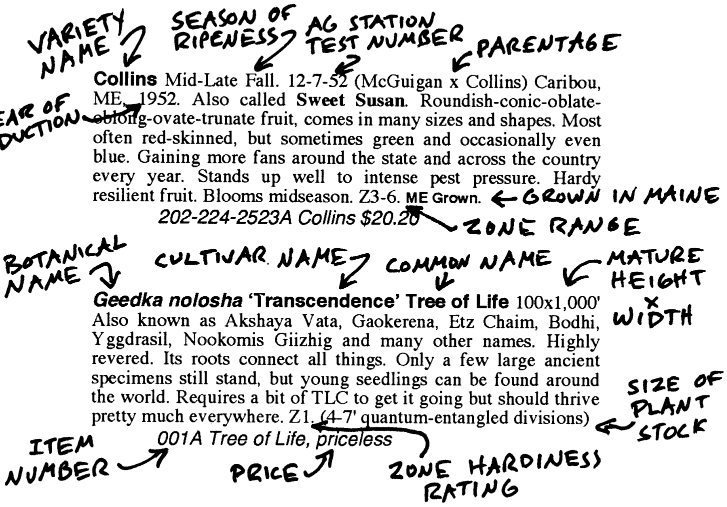
Where Is Everything?

Ordering Instructions	**p. 34**
Order Forms	**center**
Perennial Planting Guide	**p. 55**
Tree Planting Guide	**67-70**
Complete Index	**p. 71**

	begin on page
Apples	4
Rootstock & Scionwood	16, 38
Pears	17
Stone Fruits	19
Small Fruits & Berries	24
Raspberries	24
Blueberries	25
Strawberries	27
Grapes	28
Vines	28
Nuts	31
Shade Trees	31
Conifers	33
Small Trees & Shrubs	39
Crabapples	44
Roses	46
Lilacs	50
Groundcovers	51
Garden Roots	53
Mushrooms	54
Perennials	55
Medicinals	64
Tender Bulbs	66

Our Variety Descriptions –

- **All trees and plants are bare-rooted** (except where noted), and even a large order can fit into a station wagon. Because of the nature of dealing with living commodities, **size variations will naturally occur** within each crop.
- For fruit trees and berries, the **exact dates of peak ripeness** will vary from place to place.
- The **zone hardiness rating** will aid you in determining whether a plant will be hardy for you. The average minimum temperature in your area determines your zone (chart on p. 71). Apple descriptions have minimum and maximum zones because apples typically need cold climates to produce the best fruit. All other plants list the coldest hardiness zone. Your own soil conditions, microclimate and topography will be equally important in determining the best varieties for you.
- Please note **pollination requirements** for fruits, nuts and berries. Some plants are self-pollinating, others require a second plant for pollination, and others require a second variety.
- We strive to give you accurate information about all the plants we sell. If you notice inaccuracies, please let us know.

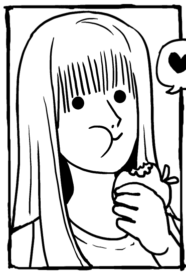


Collins Mid-Late Fall. 12-7-52 (McGuigan x Collins) Caribou, ME, 1952. Also called **Sweet Susan**. Roundish-conic-oblate-oblong-ovate-trunate fruit, comes in many sizes and shapes. Most often red-skinned, but sometimes green and occasionally even blue. Gaining more fans around the state and across the country every year. Stands up well to intense pest pressure. Hardy resilient fruit. Blooms midseason. Z3-6. **ME Grown.**

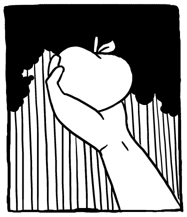
202-224-2523A Collins $20.20

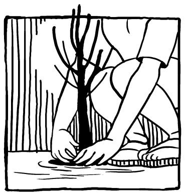
Geedka nolosha **'Transcendence' Tree of Life** 100x1,000' Also known as Akshaya Vata, Gaokerena, Etz Chaim, Bodhi, Yggdrasil, Nookomis Giizhig and many other names. Highly revered. Its roots connect all things. Only a few large ancient specimens still stand, but young seedlings can be found around the world. Requires a bit of TLC to get it going but should thrive pretty much everywhere. Z1. (4-7' quantum-entangled divisions)

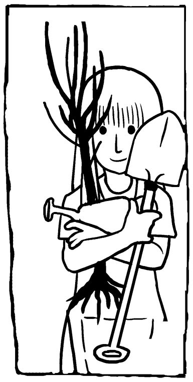
001A Tree of Life, priceless



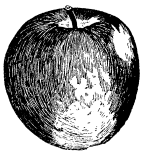
Pick the right apple!

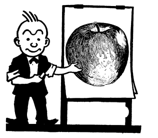






Item	Name	Season	All-Purpose	Fresh Eating	Storage	Cooking	Pies	High Flavor	Hard Cider	
									Bittersharp/ Sharp	Bittersweet/ Sweet
102	Arabskoe	fall		🍎		🍎				
103	Ashmead's Kernel	winter		🍎	🍎			🍎	sharp	
104	Baldwin	winter	🍎	🍎	🍎	🍎	🍎		sharp	
107	Bethel	winter	🍎	🍎	🍎	🍎	🍎			
109	Binet Rouge	fall								bittersweet
111	Black Oxford	winter	🍎	🍎	🍎	🍎	🍎		sharp	
112	Blenheim Orange	fall		🍎		🍎				
118	Calville Blanc d'Hiver	fall	🍎	🍎	🍎	🍎	🍎		sharp	
119	Canadian Strawberry	fall		🍎				🍎	sharp	
120	Charlamoff	summer	🍎							
122	Cherryfield	fall	🍎	🍎	🍎	🍎	🍎	🍎		
123	Chestnut	fall		🍎		🍎		🍎		
124	Chisel Jersey	fall								bittersweet
125	Clarence Knight	fall								bittersweet
128	Cortland	fall	🍎	🍎		🍎	🍎		sharp	
129	Cox's Orange Pippin	fall	🍎	🍎				🍎		
131	Dabinett	fall								bittersweet
134	Domaines	fall								bittersweet
137	Ellis Bitter	fall								bittersweet
138	Esopus Spitzenburg	winter	🍎	🍎	🍎			🍎	sharp	
139	Fallawater	winter	🍎	🍎	🍎	🍎	🍎			
141	Frostbite	fall		🍎	🍎			🍎		
144	Golden Russet	winter		🍎	🍎			🍎	sharp	
145	GoldRush	winter		🍎	🍎			🍎	sharp	
146	Gnarled Chapman	fall								bittersweet
147	Gravenstein	summer	🍎	🍎		🍎	🍎			
148	Gray Pearmain	winter	🍎	🍎	🍎			🍎		
149	Grimes Golden	fall	🍎	🍎		🍎	🍎		sharp	
150	Harrison	fall							sharp	
151	Harry Masters Jersey	fall								bittersweet
152	Hewe's Virginia Crab	fall							sharp	
153	Honeycrisp	winter		🍎	🍎			🍎		
154	Howes	fall							bittersharp	
155	Hudson's Golden Gem	fall		🍎	🍎			🍎		
157	Jefferis	fall		🍎		🍎		🍎		
158	Kavanagh	fall	🍎	🍎		🍎				
159	Keepsake	winter	🍎	🍎	🍎	🍎				
160	King David	fall	🍎	🍎	🍎	🍎	🍎	🍎		
161	Kingston Black	fall							bittersharp	
162	Liberty	fall	🍎	🍎		🍎				
165	Maiden Blush	summer	🍎	🍎		🍎	🍎			
166	Major	fall								bittersweet
167	McIntosh	fall	🍎	🍎		🍎				
168	Medaille d'Or	fall								bittersweet
170	Nehou	fall								bittersweet
171	New Brunswicker	summer	🍎	🍎		🍎	🍎			
172	Northern Spy	winter	🍎	🍎	🍎	🍎	🍎	🍎	sharp	
174	Porter's Perfection	fall							bittersharp	
178	Redfield	fall				🍎	🍎		sharp	
182	Rhode Island Greening	fall	🍎	🍎	🍎	🍎	🍎			
183	Ribston Pippin	fall	🍎	🍎	🍎	🍎		🍎	sharp	
184	Roxbury Russet	winter	🍎	🍎	🍎	🍎		🍎	sharp	
186	Somerset Redstreak	fall								bittersweet
187	Spice Sweet	summer		🍎			🍎	🍎		
188	Stark	winter	🍎		🍎	🍎				
189	Starkey	fall		🍎				🍎		
191	Sweet Sixteen	fall		🍎	🍎	🍎		🍎		
192	Tolman Sweet	fall	🍎	🍎	🍎	🍎				sweet
195	Tumanga	fall		🍎	🍎			🍎		
196	Twenty Ounce	fall				🍎	🍎			
198	Washington Sweet	fall				🍎				bittersweet
199	Wealthy	fall	🍎	🍎		🍎	🍎		sharp	
200	Westfield Seek-No-Further	fall		🍎	🍎			🍎		
201	Wickson	fall		🍎				🍎	sharp	
202	Williams Pride	summer		🍎		🍎				
203	Windham Russet	fall		🍎				🍎		
205	Wolf River	fall				🍎	🍎			
206	Yellow Bellflower	winter	🍎	🍎	🍎	🍎	🍎			
207	Yellow Transparent	summer		🍎		🍎				
208	Zestar	summer		🍎				🍎		





Apples *Malus* spp.

Summer apples ripen in summer, are generally crisp only for a short period, do not store well, and are often best for cooking.
Fall apples store longer and are useful for a wide variety of purposes.
Winter apples ripen mid to late fall, store well, and reach their best flavor after weeks, or even months, of storage.
Dessert apples are delicious eaten raw.
Cider apples are especially suited to making fermented “hard” cider. Some cider apples are also good dessert fruit, but most are not. See the apple chart (opposite) and the cider sidebar on page 7 for more info.
Subacid means tart!
Russet or **russeting** is a skin texture (fairly common on apple varieties and on a few pears and potatoes) that looks and feels somewhat like suede.
Bloom is a naturally occurring dust-like yeast film on the skin of some varieties of apples, plums, grapes and blueberries.

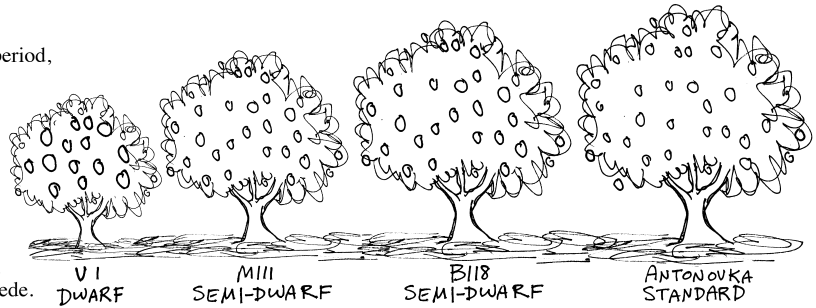
Hardiness zone ranges: Each apple variety has a climate range where it will thrive and produce its best fruit. At the end of each apple description we list a range of zones. For example, Z3-4 signifies that this apple will reach perfection in Zones 3 and 4 and that we don’t recommend it farther south even though it might be plenty hardy. Z4-6 means that this apple will reach perfection in Zones 4, 5 or 6. Although we have received reports from southern California that some of our rarest Maine apples are thriving in Zone 10A, we still suggest you use this guide to select apples most appropriate to your area.

Choosing a variety: Not every variety is right for you. **All-purpose** apples are just that—they’re good for a bunch of jobs. If I were planting just one tree, I’d start there. However, if you’re a history buff, consider the historical varieties and maybe plant one that originated nearby. If you don’t eat many apples fresh but love pies, go for the pie apples. If you’re a dessert connoisseur, skip all the others and go for the highly flavored dessert varieties. Some are strictly for cider. Some are great to put out at the camp for summer use. Some are perfect for those who want fall fruit but don’t have a root cellar. Others keep all winter and into the following summer. Read the descriptions and consult the chart. If you have a question about a specific variety, drop me an email: john@fedcoseeds.com. I’ll try to help!

Care: Apple trees are adaptable to a variety of soils and climates, though they prefer well-drained fertile soil. See pages 67–70 for information on soil preparation, planting and pest control. Varieties that bear fruit annually are noted in the descriptions; others normally bear every other year. With diligent annual pruning and thinning, most apples will produce an annual crop, one heavy, the next light.

All apple trees require a second variety for pollination, but any apple or crabapple blooming at the same time, within a quarter mile, will probably do.

ME Grown = grown in Maine at one of our small local nurseries



Standard rootstock: Rootstock determines the size, longevity, hardiness and growth habits of a tree. Most of the apples we offer are on standard (full-sized) Antonovka rootstock. Standard trees have deep, substantial—and therefore hardier—root systems. By selecting the varieties appropriate to your district, grafted on standard rootstock, you may well be planting a tree that will be picked by your grandchildren’s grandchildren. Standard trees will grow to be large, but you can keep them trimmed. The largest trees in our orchard are now about 30 years old, yet the tallest are well under 20' due to careful pruning. Standard stock is 3-6' trees.

Although standard-sized apple trees may be planted as close as 10–15' apart, they were typically planted 30' apart in 19th-c. orchards. We generally plant standard trees 20–25' apart with good results.

We offer bundles of rootstock for grafting on page 16.

Semi-dwarf and dwarf rootstocks: After an enthusiastic response from customers, we continue to offer an assortment of semi-dwarf and dwarf apples on Bud 118, M111 and V1 rootstocks. Each has great advantages for some growers, but beware! These size-controlling rootstocks also have their limitations. Please read on and decide if they are what you want. If you are uncertain, stick with the good old standards. Trees on Antonovka (standard rootstock) are extremely rugged, hardier, more tolerant of drought and poor soils, very long-lived, and more capable of thriving under a regime of benign neglect. Semi-dwarf and dwarf stock are 2-5'.

• **Bud 118 semi-dwarfing** rootstock produces a tree that is about **85–90%** of standard size or even larger. Sometimes Bud 118 trees are called semi-standards or even standards. Plant about 20–25' apart. Considered to be more precocious than standards, and probably more productive. Very hardy, though not as hardy as Antonovka.

162B Liberty

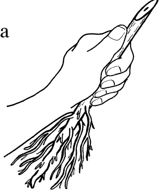
• **M111 semi-dwarfing** rootstock produces a tree that is about **65–80%** of standard size. Sometimes M111 trees are called semi-standards. You can plant them closer together than standards, about 15–20' apart. M111 may not be more precocious than trees on standard. However it will likely be more productive. It has a relatively shallow spreading root system, does well in light soils, and is relatively drought tolerant. It is less well-rooted, not as long-lived, and not as hardy as Antonovka. (See also crabapples, p. 44)

103C Ashmead’s Kernel
104C Baldwin
109C Binet Rouge
111C Black Oxford
124C Chisel Jersey
125C Clarence Knight
128C Cortland
129C Cox’s Orange Pippin
131C Dabinett
144C Golden Russet
146C Gnarled Chapman
149C Grimes Golden
150C Harrison
151C Harry Masters Jersey
152C Hewe’s Virginia Crab
153C Honeycrisp
161C Kingston Black
162C Liberty
167C McIntosh
168C Medaille d’Or
170C Nehou
172C Northern Spy
178C Redfield
184C Roxbury Russet
201C Wickson
482C-503C all crabapples

• **V1 dwarfing** rootstock produces a small dwarf tree about **55%** the size of a standard tree. Approximately the same size as those grafted onto M26, somewhat larger than Bud 9, which we’ve offered in the past. You can plant trees 5–10' apart. Trees on V1 are very hardy, somewhat fireblight resistant, sucker very little and should be staked or wired for support. We have been happy with our V1 trials and are glad to be offering dwarf trees on V1. V1 (Kerr x M9) is one of several dwarfing rootstock introductions from the Horticultural Experiment Station in Vineland, Ontario, Canada, 1958.

111E Black Oxford
153E Honeycrisp
162E Liberty
167E McIntosh

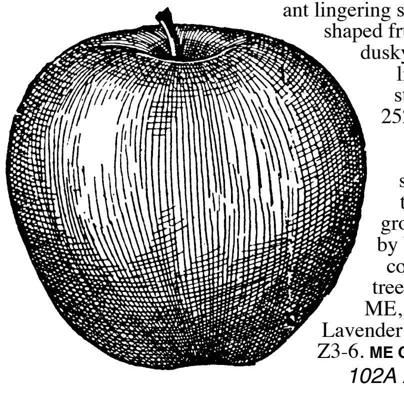
Rootstocks



We offer most apple varieties on standard-sized Antonovka rootstock. Where

A follows the item number in the apple section, the variety is on standard rootstock.
B indicates the variety is on Bud 118 rootstock,
C indicates M111, and
E is V1.

For more about rootstock, see pages 5 and 16.

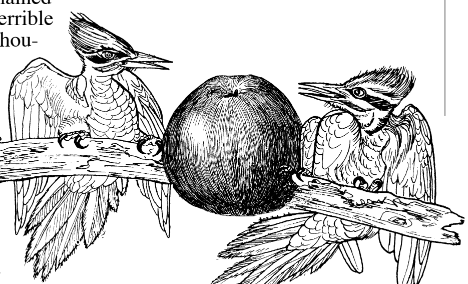


Arabskoe Mid-Late Fall. Probably Russia, well before 1870. Also called Arabkoe and Arabka. Dessert and cooking apple. Good tartness with a pleasant lingering sweetness. Roundish conic barrel-shaped fruit. A stunning apple: lavender to dusky rose with a purply-pink blush, a light bloom, and russet around the stem. In 1870 the USDA imported 252 apple varieties from Russia in a frenzied attempt to locate hardy apples. The Russian names were soon mixed up beyond repair. We think this is Arabskoe, which was grown out in varietal trials overseen by WA Munson at UMaine. We discovered the small but ancient apple tree on the Guptill Road in Belgrade, ME, so for awhile we called it Guptill Lavender. Uncertain bloom time. Probably Z3-6. **ME Grown.**

102A Arabskoe, $30.25

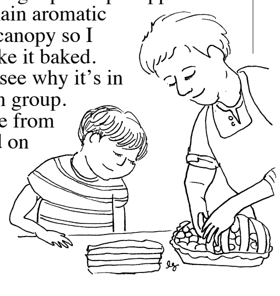
Ashmead's Kernel Winter. Unknown parentage. Gloucester, England, about 1700. Possibly a seedling of Nonpareil. An after-dinner apple of unparalleled quality. Not for those who like mild sweet apples. Each bite is an intense aromatic sting of sharp and sweet, with hints of other indescribable but absolutely wonderful tastes and aftertastes. Beginning to show up here and there in commercial orchards. A good sharp addition to hard cider. Medium-small oblate and lopsided orange-gold-green russet fruits ripen in October. Store until New Year to reach perfection. Keeps until they're all gone. Moderately vigorous tree may bear irregularly, but it's worth the wait. Somewhat scab resistant. Blooms midseason. Z4-7. Both **ME Grown.**

103A Ashmead's Kernel, $30.25
103C Ashmead's Kernel on M111, $30.25



Baldwin Winter. Wilmington, MA, about 1740. Also called **Butters Apple** or **Woodpecker**. Discovered on the Butters Farm by a surveyor planning the Middlesex Canal and noted as a favorite site for local woodpeckers. By 1850 Baldwin was the standard all-purpose home and commercial variety wherever it was grown. It remained dominant in Maine until the terrible winter of 1934 when tens of thousands of trees perished and McIntosh became king. Large round-conic thick-skinned fruit, almost entirely blushed, mottled and striped with red and deep carmine. Hard crisp juicy yellowish flesh makes excellent eating and cooking. Keeps till spring. Makes top-quality hard cider, blended or alone. Vigorous adaptable hugely productive long-lived healthy tree. When grower Dave Gott asked the late renowned entomologist Ron Prokopy his opinion of Baldwin, Ron replied that the apple is "not practical commercially due to biennialism but the *only* apple that is both disease and insect resistant." Blooms early to midseason. Z4-6. Both **ME Grown.**

104A Baldwin, $30.25
104C Baldwin on M111, $30.25



Bethel Winter. Unknown parentage. Bethel, VT, before 1855. Famous all-purpose heirloom Vermonter. Large dark red fruit with prominent dots. Orchardist and author Michael Phillips recently wrote to me, "Fruit quality is always excellent, with very little scab and generally too late for maggot fly interest. This is a divine eating apple that first month off the tree. As crispness starts to fade, Bethel still lays claim to being a prime pie apple for the holidays. We use it as well in cider: think pearmain aromatic with body. Apples develop good color even within canopy so I tend not to prune Bethel quite as heavy." We also like it baked. Although brighter red than Blue Pearmain, you can see why it's in a collection of varieties known as the Blue Pearmain group. Also similar in appearance to another deep-red apple from Bethel called Stone. They may have even originated on the same farm. Phillips, of Lost Nation Orchard in Groveton, NH, provided scionwood. Bloom later half of midseason. Z3-6. **ME Grown.**

107A Bethel, $30.25

Binet Rouge Late Fall. Traditional French mild bittersweet cider apple. Unknown parentage. Probably from Normandy, France. Bore and Fleckinger classify it as sweet. SG 1.056–1.072. Small round angular fruit, somewhat oblate and truncate, with a deep red blush covering about three quarters of the fruit. Medium to small russeted stem area and small prominent dots. Recommended for trial in most cider-apple growing districts. Eric Shatt of Redbyrd Cider in Trumansburg, NY, provided scionwood. Blooms mid-late season. Probably Z4-7. **ME Grown.**

109C Binet Rouge on M111, $30.25

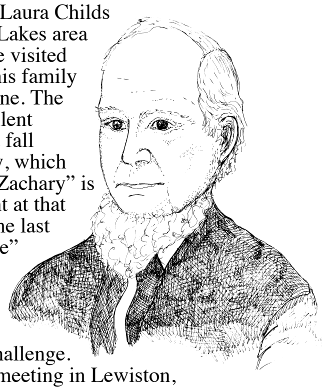
Black Oxford Winter. Unknown parentage. Paris, Oxford County, ME, about 1790. This outstanding apple, a favorite long ago around much of Maine, has been making a huge comeback in the last 20 years. Our best seller until Honeycrisp came along. Medium-sized round fruit, deep purple with a blackish bloom. From a distance you might think you'd discovered a huge plum tree. Excellent pies, superb late cider. Leave the skins on for a delightful pink sauce. Best eating late December to March, but we've eaten them in July and they were still quite firm and tasty. They get sweeter and sweeter as the months go by. Good cooking until early summer. Some insect and disease resistance. Unusual light pink blooms early to midseason. Z4-5. All are **ME Grown.**

111A Black Oxford, $30.25
111C Black Oxford on M111, $30.25
111E Black Oxford on V1, $30.25

Joseph Taylor: Champion of the chance seedling

All apple-growing regions in North America before 1900 have histories of growing apples from seed. Every apple tree grown from a seed is new and unique. Most of the fruit from these seedlings is small, rather high in acidity and sometimes bitter. These "chance seedlings" were mostly used for cider, but with seedling apples, there's always the chance that the next one you find will be the best apple you've ever tasted. Observant farmers were forever on the lookout for interesting seedlings. Was it good in a pie? In sauce? In molasses? Did it keep all winter or ripen in July? The occasional seedling apple with some desirable quality was bound to sprout up along the edge of this field or that. By the efforts of grafters, many thousands of these locally adapted varieties were named and scionwood shared among neighbors. Across the country, each community had its own assortment of varieties. This is our rich pomological heritage.

One of those unsung apple heroes was a Quaker minister and farmer named Joseph Taylor (1804-1882) of Belgrade, ME. Although very few people have heard of him now, Joseph Taylor was well known in the central Maine orcharding community 150 years ago. He was always on the lookout for new seedlings of merit. He named about a dozen.

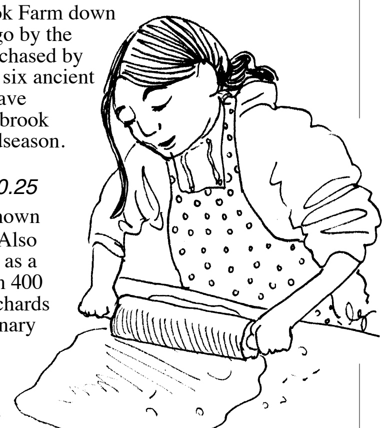


For the past decade, Fedco staffer Laura Childs and I have been scouring the Belgrade Lakes area to find Taylor's named varieties. We've visited the amazing stone house he built with his family using rocks from all 16 counties in Maine. The apples we've located so far are of excellent quality. "Childs" is a medium-large red fall dessert apple, named for Laura's family, which has been in Belgrade for generations. "Zachary" is a winter keeper, named for the president at that time who just happened to have the same last name as the orchardist. "Rome of Maine" refers to the town north of Belgrade. And there was Columbus, Judy, Stuart, Beehive, Sugar Ball and others. Our search is going well although matching the names with the apples has been a challenge.

At the 1876 Pomological Society meeting in Lewiston, ME, Joseph Taylor confessed, "I think I grow too many varieties. When I have seen a good variety I have had the curiosity to try it, and hence I have got a large variety of apples in my orchard—some 60 different kinds." ZA Gilbert, president of the society, replied, "He can't help introducing new varieties, because his interest in the matter prompts him to do it. He is just the kind of man we want. His practice may not prove profitable to himself, but it results in good to the public." –John Bunker

Blenheim Orange Fall. Woodstock, Oxfordshire, England, before 1800. Large beautiful rich-yellow oblate fruit with a prominent red blush and a big russet splash surrounding the stem. *The Apples of New York* deems it "excellent for either dessert or culinary use." Crisp and juicy. Keeps until about mid-December. Probably first arrived in Nova Scotia and then on to Maine. One of the few English apples to thrive here early on, two others being Ribston Pippin and Sops of Wine. In the fall of 2014 we visited John Welsh IV and his family at Willowbrook Farm down on the coast, settled nearly 200 years ago by the Cunningham family and eventually purchased by an earlier John Welsh in 1866. We saw six ancient trees there, four of them being what I have identified as Blenheim Orange. Willowbrook Farm provided scionwood. Blooms midseason. Z4-7. **ME Grown.**

112A Blenheim Orange, $30.25



Calville Blanc d'Hiver Winter. Unknown parentage. France or Germany, 16th c. Also called **White Winter Calville**. Famous as a dessert and cooking apple for more than 400 years. Steve Wood of Poverty Lane Orchards in Lebanon, NH, called it "the best culinary apple in the world." Large flattish pale green-yellow fruit with deep ribs and a dotted orange-red blush. Creamy-white aromatic fine-grained juicy flesh with a sweet distinctive effervescent flavor. Also recommended for vinegar, fresh cider and as a sharp (acid) component in fermented cider. Should be stored a month to reach peak flavor. Will keep until midwinter. Very vigorous strongly upright vase-shaped tree with good branch angles. Not for coldest areas though certainly hardy to Zone 4. Blooms midseason. Z4-7. **ME Grown.**

118A Calville Blanc d'Hiver, $30.25

ME Grown = grown in Maine at one of our small local nurseries

Apple Collections

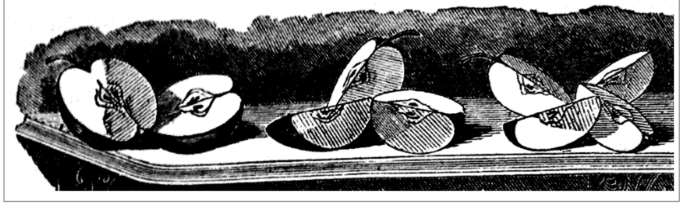
Each collection is chosen by Fedco's John Bunker and may include varieties not listed in this catalog. Rootstocks will be **semi-dwarf and standard**. Trees are individually labeled within each bundle.

Hard Cider Apple Collections A bundle of 5, 10, or 25 trees to begin your cider orchard. Collections include an assortment of bittersharp and bittersweet apples. Please note that purchasing a bundle of 25 will give you an additional 15% discount if you order before the discount deadline. See order form, page 35, for details. **ME Grown.**

220A Hard Cider Apple Collection, bundle of 5, $140.00
221A Hard Cider Apple Collection, bundle of 10, $270.00
222A Hard Cider Apple Collection, bundle of 25, $650.00

Heritage Apple Collections A bundle of 5 or 10 trees to begin your own heritage orchard. Each tree in the bundle will be a different heirloom traditionally grown in northern New England. **ME Grown.**

223A Heritage Apple Collection, bundle of 5, $140.00
224A Heritage Apple Collection, bundle of 10, $270.00



Cider Apples

Each year we offer a different assortment of the best European and American cider varieties. Many of these are NOT for fresh eating. They do however possess the qualities that make them very desirable for ***fermented*** cider production. Please note the descriptions for details. We also offer crabapples suitable for cider. See the crabapple section on page 44.

It's All in the Mix!

"From the great diversity of soil and climate in the United States of America, and the almost endless variety of its apples, it followed that much diversity of taste and flavor will be necessarily found in the cider that is made from them." – Colin MacKenzie, 1829.

For the best cider, plant several varieties. That's because when it comes to cider, it's all in the mix. Unlike beer, cider has only one ingredient: apples. So the apples have to provide everything: acidity, sugar, tannin and flavor.

We classify the cider varieties into four categories: **sharp** (low in tannins, high in acid), **sweet** (high in sugar, little or no tannin, low acid), **bittersharp** (high in tannins and high acid) and **bittersweet** (high tannins and sugar, low acid). **Tannin** denotes naturally occurring compounds whose bitter astringency gives rounded full flavor, body and golden color. Is there a difference between **bitterness** and **astringency**? An excellent 2012 University of Reading (England) publication titled *Sustainable Cider Apple Production* attempts to define them: "Astringency is a drying, puckering sensation in the mouth in which the whole tongue is affected, while bitterness is mostly perceived at the sides and back of the tongue."

Vintage refers to varieties with the perfect qualities for cider.

We recommend you plant some sharp apples for acidity, some sweet apples for sugar and some bitter apples for the tannin. See the chart on p. 4 for suggestions. Our best cider has been from about 40% bittersweet (astringent) apples and 60% mixed dessert and cooking apples.

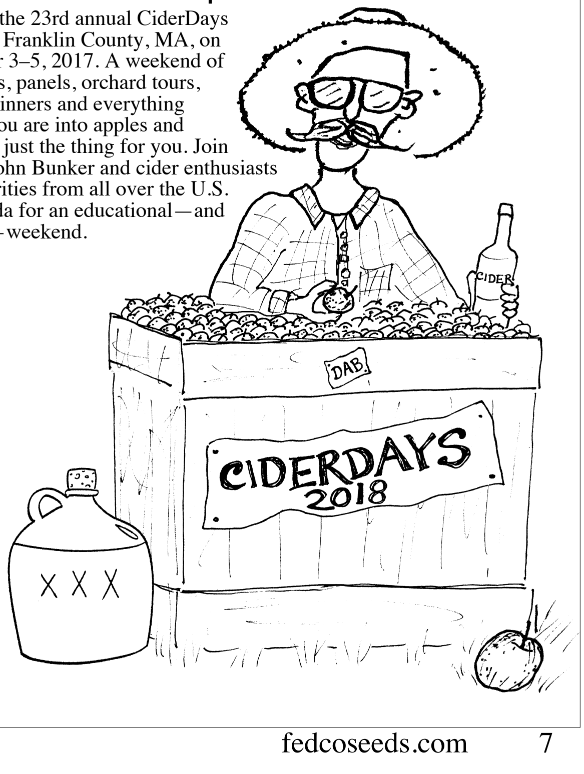
Cider Reading

Three good basic books are *Cider, Hard and Sweet: History, Traditions, and Making Your Own* by Ben Watson; *Cider: Making, Using and Enjoying Sweet and Hard Cider* by Annie Proulx and Lew Nichols; and *Apples to Cider: How to Make Cider at Home* by April White with Steve Wood. *The New Cidermaker's Handbook: A Comprehensive Guide for Craft Producers* by Claude Jolicoeur takes cidermaking to a more advanced level.

If you're considering a trip to the cider orchards of England or France, or just want to know more about regional ciders, try *Ciderland* by James Crowden (English cider) and *Calvados: The Spirit of Normandy* by Charles Neal (French cider). The best book on English cider varieties is *Cider Apples: The New Pomona* by Liz Copas. For French cider varieties, the best is *Pommiers à cidre: variétés de France* by JM Boré and J Fleckinger (in French only).

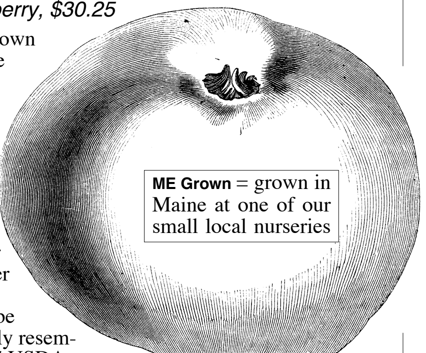
For the ultimate cider experience

Join us at the 23rd annual CiderDays festival in Franklin County, MA, on November 3–5, 2017. A weekend of workshops, panels, orchard tours, tastings, dinners and everything cider. If you are into apples and cider, it is just the thing for you. Join Fedco's John Bunker and cider enthusiasts and celebrities from all over the U.S. and Canada for an educational—and very fun—weekend.



Canadian Strawberry Fall. Unknown parentage. Solon, ME. Beautiful superb-tasting dessert apple. Surprisingly juicy distinctly tart full-flavored medium-to-large round-conic fruit. Rich buttery-yellow skin overspread with a veil of vibrant red-orange. Very good early season cider. Perfectly ripe at the end of September in central Maine where, in a good year, you won't find a better apple. At our Common Ground Fair taste tests, it usually vies for the crown with Cox's Orange Pippin. It was a split decision in 2015. In 1996 the late Roy Slamm convinced me to visit and subsequently propagate nursery stock from the three ancient "Strawberry" trees on his South Solon farm, thus saving the apple from almost certain extinction. Now spreading throughout Fedcoland. Fruit keeps about a month. Blooms midseason. Not to be confused with Chenango Strawberry. Z4-5. **ME Grown.**

119A Canadian Strawberry, $30.25



ME Grown = grown in Maine at one of our small local nurseries

Charlamoff Late Summer. Unknown parentage. Probably Russia, before 1800. Big beautiful ribbed lumpy blocky Duchess-type all-purpose summer apple of excellent quality. Typical Duchess red stripes, except the overall color has a distinctly lavender-pink hue and the flesh is red stained. We first discovered two old grafted trees in Bridgewater, ME, in September 2015. While some sources consider Charlamoff to be a synonym of Duchess, others consider them to be distinct varieties. This apple closely resembles the Charlamoff from the 1907 USDA watercolor. Extremely hardy, worthy of trial in the coldest apple-growing districts. Scionwood provided by Pauline and Steve Hayer of Cat Nap Farm in Bridgewater. Uncertain bloom time. Z3-6. **ME Grown.**

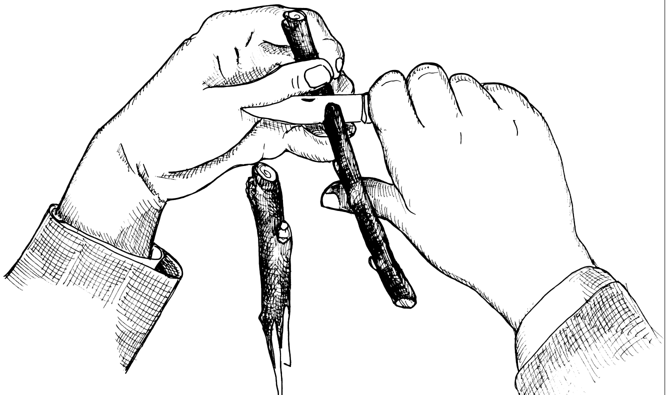
120A Charlamoff, $30.25

Cherryfield Fall-Winter. Unknown parentage. Wyman B. Collins intro, Cherryfield, ME, about 1850. Also called **Collins**. This all-purpose variety has become one of my favorites. It does everything well. Very nice fresh. Relatively tart with only a hint of sweetness. Good in salads. Quick tart sauce with a smooth texture, the skins mostly dissolved. Makes a highly flavored pie, a bit loose with great color and texture. Excellent sliced up on pizza. Irregular conic shape reminiscent of a Golden Delicious. Mostly washed and striped with pink over a yellow background. Ripens about Oct. 15 and keeps until the end of March. Rediscovered with the help of Margery Brown, Larry Brown and Kathy Upton, all of Cherryfield, ME. Tree vigorous, hardy, spreading and productive. Blooms early-midseason. Z4-6. **ME Grown.**

122A Cherryfield, $30.25

Chestnut Early Fall. MN 240 (Malinda x open-pollinated) U Minn, 1946. A dessert crab with truly excellent fruit for fresh eating, pickles and sauce. Round 2" yellow and bronze-red apple with some russeting. Firm crisp juicy fine-grained very sweet yellowish flesh. For a growing number of people in central Maine, late September is Chestnut apple time. Always scores high at our Common Ground Country Fair taste tests. A lot of people love this apple. For a few, despite its crispness and depth of flavor, it is too sweet. Chestnut alone with no sugar makes a sweet and subtle sauce. Not a keeper, but can be stored for a month or two. Vigorous, somewhat weeping, medium-sized productive tree. Disease resistant. Also beautiful in bloom, mid-late season. Z3-6. **ME Grown.**

123A Chestnut, $30.25



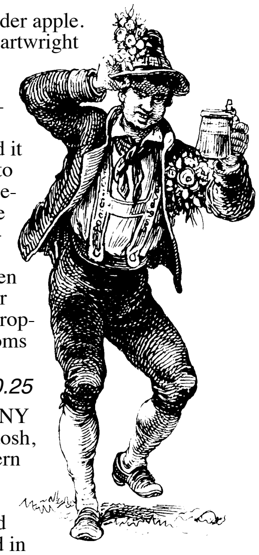
Custom Grafting

Large orders: If you are interested in planting a large orchard (several hundred or several thousand trees), we would be happy to custom graft the varieties you want onto the rootstock of your choice. These will be small bare-root trees ready to plant in the spring (not field grown by us). This is a great cost savings for large-scale orchardists. Please contact us for details: write, call or send an email to: trees@fedcoseeds.com.

We'd be pleased to work with you as you plan your orchard.

Chisel Jersey Late Fall. Full bittersweet cider apple. Martock, Somerset, England, 19th c. One of the most famous of the Somerset bittersweets. Best blended with other apples, it makes a strong rich cider. Medium acidity, highly astringent, harsh and high in tannins. (SG 1.068, acidity 2.2g/L, tannin 4g/L) Round to slightly conic slightly greasy fruit, colored with a beautiful combination of dull opaque reds, yellows and russets. In old English *chesil* means 'pebble'—Chisel Jersey is small, hard and bitter! Spreading tree may require encouragement to develop a strong central leader. Consistent cropper. Closely related to Dabinett; they should not be relied upon to pollinate one another. One source recommends Harry Masters Jersey as a good companion for pollination. Late bloomer. Z4-7. **ME Grown.**

124C Chisel Jersey on M111, $30.25



Clarence Knight Mid-Late Fall. Bittersweet cider apple. Probably Lincolnville, ME, before 1900. Gene Cartwright of Whaleback Cider recently found this seedling in an old orchard near his home in Lincolnville. He describes the fruit as having a "bitterness pronounced before peak ripeness but tapering to a more mild sweetness when fully ripe. I don't find it to be all that astringent, would be more inclined to call it a bittersweet." The fruit develops an orange-red blush that slowly spreads to most of the apple by peak ripeness in late October to early November. Gene calls it Clarence Knight after the first settler of the property. The Knights may have been the ones who planted the seed. Recommended for trial in all cider-apple growing areas. Moderate cropper. Willowy rangy largely tip-bearing tree. Blooms midseason. Z4-7. **ME Grown.**

125C Clarence Knight on M111, $30.25

Cortland Fall-Winter. (Ben Davis x McIntosh) NY Stn, 1915. Although never as important as McIntosh, Cortland remains very popular throughout northern New England even in this era of many new introductions. Medium-large slightly ribbed dull red fruit with a purple blush. Excellent eating and cooking. Slow-oxidizing white flesh is very good in salads; fine-grained, crisp, tender, juicy. Produces a surprisingly delightful cider, fresh or fermented, in a mix or even on its own. Vigorous tall upright spreading tree. Annual producer of heavy crops. A recent U Mass study showed resistance to apple maggot fly. Bears young; remove fruit for the first year or two to avoid stunting growth. Susceptible to scab. Blooms midseason. Z4-6. Both **ME Grown.**

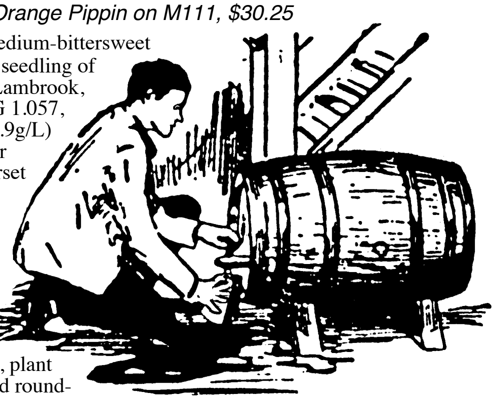
128A Cortland, $30.25

128C Cortland on M111, $30.25

Cox's Orange Pippin Fall. Possibly a seedling of Ribston Pippin. Near Slough, Bucks, England, around 1825. Deservedly one of the three or four most famous of all apples. Not only one of the best eating apples ever but also one of the most sought-after in modern apple breeding; parent or grandparent of many other varieties. Revered in the U.K. Medium-sized all-purpose aromatic fruit is red-orange to red with orange russet striping and wash. Perfectly balanced slightly subacid flavor and crisp juicy tender flesh improve with storage. Moderately vigorous moderately productive tree bears young and annually. Prefers cooler climates and higher pH (6.5–7.5+). The oldest Maine Cox's I know is about 40 years old, thriving in Mercer, Zone 4. Scab resistant. Blooms midseason. Z4-7. Both **ME Grown.**

129A Cox's Orange Pippin, $30.25

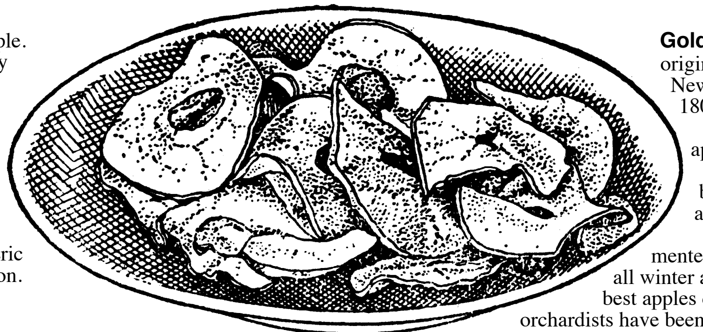
129C Cox's Orange Pippin on M111, $30.25



Dabinett Late Fall. Medium-bittersweet cider apple. Probably a seedling of Chisel Jersey. Middle Lambrook, Somerset, England. (SG 1.057, acidity 1.8g/L, tannin 2.9g/L) One of the most popular cider varieties in Somerset today and one of the mainstays of Poverty Lane Cider Orchards. At a MOFGA workshop, Steve Wood of Poverty Lane and Farnum Hill Ciders said, "If you're going to plant one bittersweet, plant this one." Medium-sized roundish fruit covered with brownish brick-red stripes and blush. Sugar content fair and fermentation moderate. High-quality well-balanced low-acid cider with a soft-tasting tannin. Picked last week of October, usually blended with other late varieties. Crops annually. Grower-friendly tree with flat lateral branches may require help in developing a strong central leader. Not pollen compatible with Chisel Jersey. Midseason bloom. Z4-7. Both **ME Grown.**

131A Dabinett, $30.25

131C Dabinett on M111, $30.25



Domaines Early-Mid Fall. Bittersweet cider apple. Unknown parentage. Normandy, France, probably before 1900. Sometimes known as De Clou or Domaines du Calvados to differentiate it from another variety, Domaines de l'Eure. Medium-large roundish-oblate yellow fruit, splashing and striped with red. Tender and bitter. SG around 1.067. Best blended with other cider apples. Recommended in the Pays d'Auge cider area of northern France in 1949 and sent to the USDA ARS collection in Geneva, NY, that same year. Eric Shatt provided scionwood. Blooms mid-late season. Zones 5-8 though worth trialing in Z4. **ME Grown.**

134A Domaines, $30.25

Ellis Bitter Early Fall. Medium bittersweet cider apple. Newton St Cyres, Devon, Somerset, England. Large oddly conic fruit—sometimes ribbed—mostly striped and blushed with red. White-fleshed, sweet, crisp and juicy. Soft, astringent, tannin. (SG 1.033–1.053, acidity 2g/L, tannin 2.4g/L) Particularly useful for its early ripening, adding valuable bitterness to early-season cider pressings. Blend with other early dessert apples or cider varieties. Still grown in England's West Country cider orchards and now being planted in the U.S. Fast-growing large upright rangy open vigorous tree produces regularly. Midseason bloomer. Z4-6. **ME Grown.**

137A Ellis Bitter, $30.25

Esopus Spitzenburg Fall-Winter. Esopus, NY, before 1776. For more than 200 years "Spitz" has been a choice dessert and culinary variety, mentioned in nearly every list of best-flavored apples. Slightly subacid, crisp and juicy. Excellent acid source for sweet or fermented cider. Medium-large bright red round-conic fruit, covered with russet dots. Moderately vigorous tree with easily trained wide-angle branches. Forever famous as Thomas Jefferson's favorite apple though it vastly prefers New York and New England to Virginia. Moderately susceptible to scab though we have never sprayed ours with fungicides and the fruit has been great. Blooms mid-late season. Z4-7. **ME Grown.**

138A Esopus Spitzenburg, $30.25

Fallawater Fall-Winter. Bucks County or Montgomery County, PA, or perhaps Germany, early 19th c. Winter keeper. Good eating, and for fresh sweet cider. Distinctive very large blocky fruit—sometimes up to 4", big enough for a one-apple pie!—with pale bluish-green skin and a rusty-pink blush. The color is impossible to forget. Mildly sweet medium-coarse very juicy flesh. Best fresh eating late fall into December. An apple with many synonyms including Winter Blush and Tulpehocken. Originally called Pharrar Walther, then Farawalder. Maine orchardist Francis Fenton always called it Fallswater. Oh, those apple names. Probably brought to Maine well before 1900. Old trees can still be found here and there across the central part of the state. Stout solid large vigorous tree. Blooms early-midseason. Z4-7. **ME Grown.**

139A Fallawater, $30.25

Frostbite Fall-Winter. MN 447. Unknown parentage. U Minn, 2007. Seed planted at the University of Minnesota before 1936, but unnamed until 2008. This massively flavored dessert apple—not for the faint of heart—provides a whole new level of culinary experience. The roundish fruit is medium-sized and dark bluish-purple. The aromatic crisp crystalline flesh is an apricot-orange color with occasional red staining. So juicy it'll run down your hand. Likely the most distinctive and unusual apple we've ever tried. Described as tasting like molasses, sugar cane and yogurt. The fall dessert apple that we most look forward to on our farm. We love it! Extremely hardy, productive and reliable. Not recommended for warmer districts. Blooms early to midseason. Z3-6. **ME Grown.**

141A Frostbite, $30.25

ME Grown = grown in Maine at one of our small local nurseries

Golden Russet Winter. Uncertain origin. Thought to be from England, New York or New England, before 1800. Round medium-sized russet fruit. The champagne of cider apples, ripening late in fall when the best sweet cider is ready to be made: sweet, balanced, thick and smooth. Also recommended as a sharp component for fermented cider. Excellent eating; keeps all winter and well into spring. One of the best apples dried. For more than 100 years, orchardists have been attempting to sort out the various russets. Several different apples have been called Golden Russet. Most resemble one another visually but differ in fruit qualities and tree habits. This is most likely the Golden Russet of Western New York. Vigorous diverging upcurving tree with long willowy branches. Scab resistant. Blooms early to midseason. Z4-6. Both **ME Grown.**

144A Golden Russet, $30.25

144C Golden Russet on M111, $30.25

GoldRush Winter. Coop 38 {PRI 2750-6=[Coop 17 (PRI 1689-100) x Golden Delicious]}. PRI Coop, 1994. The first of the new disease-resistant varieties from the Purdue-Rutgers-Illinois apple breeding program to have superior storage qualities. Not only that, it's probably the best-tasting apple to come out of that program. Medium-to-large round-conic fruit has uniform deep greenish-yellow opaque chewy skin that turns golden in storage. Creamy white green-flecked flesh is hard, very crisp, juicy and tart. Excellent flavor. Serve them for dessert in February and March and no one will be disappointed. Ripens late but successfully in central Maine. Keeps until May in the root cellar. Highly resistant to scab and powdery mildew. Moderate fireblight resistance. Blooms midseason to late. Z4-6. **ME Grown.**

145A GoldRush, $30.25

Gnarled Chapman Fall. Bittersweet cider apple. Unknown parentage. Eric Shatt intro, Hector, NY, 2015. Large, roundish-oblate and outrageously beautiful. Yellowy-green skin with a glowing orange blush, netted and dotted with russet. Eric named this seedling in honor of America's most famous apple guy, John "Appleseed" Chapman. Vigorous upright tip-bearing tree. Recommended for trial in all cider-apple growing districts. Blooms midseason. Z4-7. **ME Grown.**

146C Gnarled Chapman on M111, $30.25

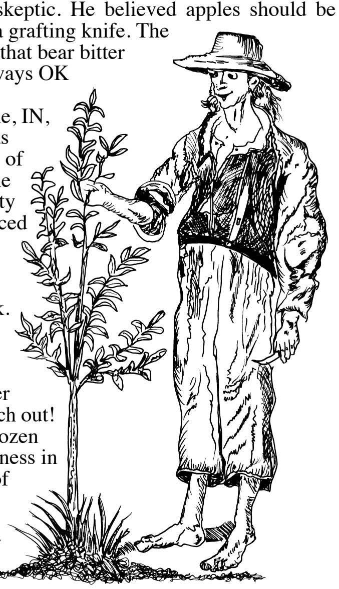
John "Appleseed" Chapman

Honored in myth, legend, poetry, cartoons, literature and everywhere else, Johnny Appleseed (1774-1845) was born in Leominster, MA, and really did plant millions—or maybe it was billions—of apple seeds throughout Pennsylvania, Ohio, Indiana, Illinois, West Virginia and even up into Canada. To some degree, John Chapman was just doing what everyone else was doing at the time: planting apple trees from seed. But he was also a visionary whose goal was to help prepare people for their new lives in the Midwest. Apple orchards played a key role in every farm, but they need a few years to get going before they begin to bear fruit—that's where Chapman found his niche. He collected bags of apple seeds from the spent pomace at cider mills back east and then planted the seeds in makeshift woodland nurseries farther west. By the time settlers arrived, the apple trees were waiting for them.

As a follower of the Christian mystic Emanuel Swedenborg, Chapman revered all life and was a grafting skeptic. He believed apples should be grown from seed, not mutilated with a grafting knife. The majority of apple seeds produce trees that bear bitter fruit, and when pressing cider, it's always OK to be bitter. It's actually better!

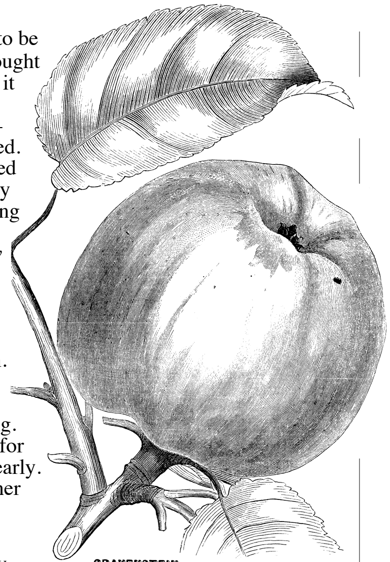
By the time he died in Fort Wayne, IN, in 1845, the seedling apple culture was dying, too, replaced by the new world of grafted apple varieties. It is only by the process of grafting that an apple variety can be replicated. As commerce replaced self-sufficiency and beer replaced cider, there was no longer a need for the seedling apple trees. But the bitter apple pendulum is now swinging back. Cidermakers are once again planting apples from seed and scouring the countryside for the bitter seedling apples they hope will become the cider varieties of the future. Beer makers watch out!

Fedco is trialing more than two dozen newly discovered seedlings for usefulness in cider. This year we're offering three of them: Clarence Knight (**125**), Howes (**154**), and most appropriately, Gnarled Chapman (**146**). We're pretty sure Johnny would be flattered.



Gravenstein Late Summer. Thought to be of 17th-c. Italian or German origin. Brought to the U.S. in the early 19th c. By 1880 it was the most popular summer apple in Maine. Fruit is medium to large, irregularly round, asymmetrical, usually ribbed. Thin tender skin, striped with yellow, red and orange. Tender crisp aromatic richly flavored juicy firm tart flesh. Outstanding eating and cooking. Rated "very good to best" by Beach in *The Apples of New York*. Probably *the* most famous of all summer apples and usually considered the best of all pie apples. Still commonly grown in Nova Scotia, northern California, Oregon and Washington. Large vigorous productive tree with a nearly perfect wide-angle branching habit that requires practically no training. Ripens over several weeks. Too tender for colder areas of New England. Blooms early. Triploid: not suitable for pollinating other varieties. Z4-7. **ME Grown.**

147A Gravenstein, $30.25

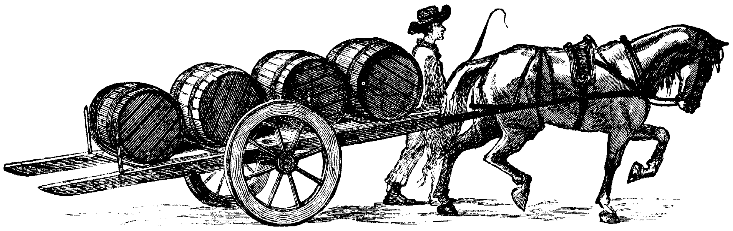

GRAVENSTEIN.

Gray Pearmain Fall-Winter. Probably Skowhegan, ME, before 1870. Absolutely delicious dessert (fresh eating) apple with a distinct pear flavor and firm white juicy mildly tart flesh. Steadily gaining a devoted following. Medium-sized slightly ribbed and muffin-shaped fruit has a soft opaque greenish-yellow skin with a rosy pink blush, a russet veil, and a greyish bloom. Produces excellent juice. Pick late and eat them in the fall and all winter. Until recently the only trees we knew of were at The Apple Farm in Fairfield, across the line from Skowhegan. Through the generosity of the Meyerhans, the Gray Pearmain is now being grown throughout Maine and beyond. Annually bearing easy-to-grow medium-sized spreading tree. Blooms midseason. Z4-6. **ME Grown.**

148A Gray Pearmain, $30.25

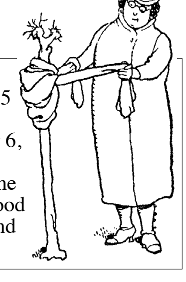
Grimes Golden Fall. Unknown parentage. West Virginia, c. 1804. All-around excellent variety grown in old Maine orchards for more than 100 years. Medium-sized roundish fruit with opaque yellow skin scattered with grey russet dots and an occasional faint blush. Thought to be a parent of Golden Delicious. Tart citrusy crisp dense firm fruit is excellent for dessert and cooking: wonderful spicy fresh eating and splendid applesauce. Makes a thick sweet cider and a good single-variety hard cider: light and fruity. In Central Maine they begin to ripen and drop in mid-October. We collect them off the ground and use them up. Around November 1 we pick the bulk of the crop and store them in the root cellar until spring. Productive precocious tree bears annually. Highly recommended. Blooms mid to late season. Z4-7. Both **ME Grown.**

149A Grimes Golden, $30.25
149C Grimes Golden on M111, $30.25



Harrison Mid-Late Fall. Vintage cider apple. Unknown parentage. South Orange, Essex County, NJ, as early as 1712. One of the most renowned American cider apples, dating from the early days of domestic cidermaking. Harrison cider was famous and considered to be better than champagne. Medium-small oval yellow-skinned fruit. Rich firm dry yellow flesh. According to William Coxe in 1817, it makes a "high coloured, rich, and sweet cider of great strength, commanding a high price in New-York, frequently ten dollars and upwards per barrell." Vigorous productive tree. A Harrison revival is underway in several locations on the East Coast. Performing well in our central-Maine trials. Appears to be plenty hardy. Z4-8. Both **ME Grown.**

150A Harrison, $30.25
150C Harrison on M111, $30.25



Hardiness zone ranges

At the end of each apple description is a zone range. Z3-5 means this particular apple will do best in the USDA hardiness Zones 3, 4 and 5. It might do fine in Zone 2 or 6, but it should be at its peak in Zones 3-5.

Ripening dates vary depending on location and on the conditions of a particular year. We hope to give you a good sense of when a variety will ripen, but please bear in mind that it might be different out your way.

Harry Masters Jersey Fall. Medium-full bittersweet cider apple. Often called **Port Wine** in north Somerset. Probably introduced by Harry Masters, Yarlington Mill, Woolston, Somerset, England, before 1900. High-quality bittersweet variety recommended for blending with other fall varieties. Soft astringent tannin. (SG 1.056, acidity 2g/L, tannin 3.2g/L) Becoming popular commercially in New England in recent years. One of the mainstays of Farnum Hill Cider. Medium-large oblate-conic fruit, mostly covered with bright red stripes and blush, and a splash of yellow russet around the stem. Narrow upright tree form. Harry Masters himself was the miller at Yarlington Mill. Harry Masters Jersey and Yarlington Mill are thought to be of the same parentage. Blooms midseason. Z4-7. **ME Grown.**

151C Harry Masters Jersey on M111, $30.25

Hewe's Virginia Crab Fall. Possibly a seedling of the native *M. coronaria* var. *angustifolia*. Probably Virginia about 1700. One of the most prized of all American cider apples. So important was the apple that in his 1817 *A View of the Cultivation of Fruit Trees*, William Coxe devoted an entire chapter to making cider with Hewe's. The red-skinned white-spotted fruit is small, round, juicy, tough, astringent and acidic. According to AJ Downing in 1848, Hewe's "makes a very high flavoured high dry cider, which, by connoisseurs, is thought unsurpassed in flavour by any other." The fruit is small—you may want to plant several! Quite hardy despite its name. Long ago used as a rootstock even as far north as Maine. Blooms midseason. Z4-7. **ME Grown.**

152C Hewe's Virginia Crab on M111, $30.25

Honeycrisp Winter. MN 1711 (Keepsake x open-pollinated) U Minn, 1991. Medium-large fruit, mottled and striped red over yellow. Sweet and juicy with hard snapping-crisp texture. Top quality in September. Improves steadily in storage. Unusual because it ripens in early fall yet keeps up to seven months in the root cellar. First of the many excellent University of Minnesota introductions to receive large-scale commercial attention, now has a huge following. Our best-selling apple. Probably best planted north of Massachusetts; less suited to warmer districts. Tends towards annual bearing. Relatively small low-vigor upright spreading tree. Above-average scab resistance. Blooms mid-late season. Z3-5. All are **ME Grown.**

153A Honeycrisp, $30.25
153C Honeycrisp on M111, $30.25
153E Honeycrisp on V1, $30.25

Howes Midfall. Bittersharp cider apple. Unknown parentage. Thought to be a seedling of Jonathan. Bear Swamp Orchard intro, Ashfield, MA, 2009. Seedling recently discovered by orchardist and cidermaker Steve Gougeon in his family's orchard in Ashfield, MA. Small yellow fruit with a deep red blush. SG 1.058, pH 3.5, medium acidity and high tannins. Steve wrote to me that "on its own some pretty intense hard cider, great for blending…good tannins, very fruity flavors, ferments really clean…it seems really promising." Recommended for trial in all cider apple growing areas. Scab resistant. Annually bearing. Blooms late season. Z4-7. **ME Grown.**

154A Howes, $30.25

Hudson's Golden Gem Fall. Tangent, OR, 1931. Discovered in a fence row and introduced soon afterward by AD Hudson's Wholesale Nurseries. This is a truly fine dessert fruit of unique appearance and exceptional flavor. Magnificent medium-to-large distinctly conical russeted long-stemmed fruit. Skin a soft yellow-tan overlaid with a fine weave of light and dark browns. Sweet juicy crisp smooth firm-but-melting yellow pear-like flesh. A local favorite in Oregon, more recently gaining notice practically everywhere apples are grown. Popularized in Maine through the efforts of Mark Fulford. Stores several months. Productive annual-bearing scab-resistant tree. Also resists powdery mildew and fireblight. Blooms mid-late. Z4-9. **ME Grown.**

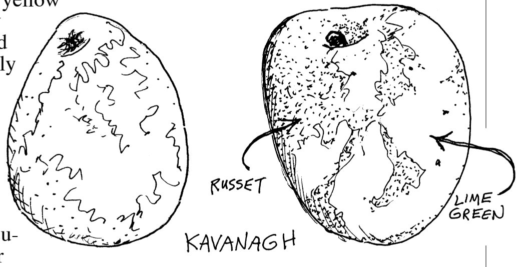
155A Hudson's Golden Gem, $30.25

Apple Pollination Panic

Customers frequently ask us about pollination and apples. Early season, midseason, late season bloomers—what does it all mean? Should you be in a tizzy about pollination? No. If there is at least one other apple tree somewhere in your neighborhood, the bees will do their thing, and you'll get fruit. That other tree can be a Fedco apple of a different variety. It can be a wild roadside apple tree. It can be an ornamental crabapple. It can be old or young, in your yard or your neighbor's. But it must be different from yours. In other words, avoid planting ten Honeycrisps if no other apples are in sight. Most apples flower at about the same time so timing is almost never an issue. However, if you live on a desert island with only an early bloomer and a late bloomer, you should plant a midseason bloomer, too.

Jefferis Fall. Unknown parentage. Isaac Jefferies intro, Newlin Township, Chester County, PA, before 1830. Excellent fall dessert apple—crisp, tender, juicy and slightly tart or mildly subacid. *The Apples of New York* calls it "delicious." Enough tartness to suggest good cooking. By 1872 it was a recommended variety to grow in Maine. Medium-sized roundish-oblate-conic fruit is blushed and splashed with orangey-red. Introduced to us by the late Don Johnson of Herman, ME, a backyard orchardist who was always on the lookout for new and interesting varieties. Jefferis was one of his favorite finds. Word is that Don's collection will be maintained by new owners. Another orchard saved! Blooms mid-late season. Z4-8. **ME Grown.**

157A Jefferis, $30.25



Kavanagh Fall. Unknown parentage. James Kavanagh intro, Damariscotta Mills, ME, 1790. This unforgettable large apple is sometimes called **Cathead** because of its distinctive shape: a large stem end tapering to a small blossom end, typical of some Irish varieties. About half russet and half deep rich lime green. Slightly yellow flesh is mild, moderately crisp, moderately tart and subtle. Good fall and early winter eating, excellent for cooking and drying. Even frying. Foams up quickly into a wonderful creamy sauce, no need to remove the skins. Popular ages ago along the Maine coastal peninsulas, anywhere a schooner could land. Finally making its comeback! Blooms late. Z4-6. **ME Grown.**

158A Kavanagh, $30.25

Keepsake Winter. MN 1593. (MN 447 [Frostbite] x Northern Spy). U Minn, 1979. One of the best of all winter storage varieties. Fine-textured flesh is hard, crisp, juicy and sweet. Excellent aromatic flavor, but wait about a month after picking before eating. Well named—keeps until July in the root cellar. Irregular conic medium-sized fruit is almost entirely overlaid with stripes and a wash of very deep red. Same parentage as Sweet Sixteen. Resembles Frostbite and Sweet Sixteen in appearance and taste, although the flavor is not quite as intense. Fruit size can be somewhat small. Don't be afraid to thin the crop each year 3 or 4 weeks after petal fall. You'll be happy you did. Moderately vigorous medium-sized tree reaches its prime in northern New England and the Upper Midwest. Somewhat resistant to scab. Blooms late. Z3-6. **ME Grown.**

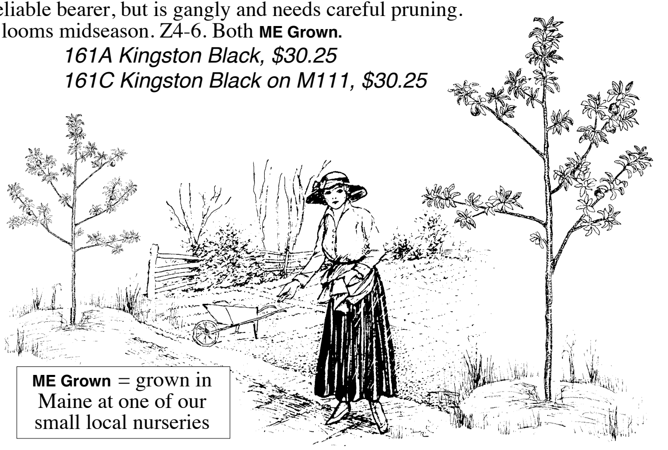
159A Keepsake, $30.25

King David Fall-Winter. Chance seedling, thought to be Jonathan x Arkansas Black, Washington County, Arkansas, 1893. Starks Brothers Nursery intro, 1904. King David has a reputation as an intensely flavored apple. It may be the most flavorful apple I've ever eaten. The initial bite is an explosion of flavors—pineapple, tangerine, lemon, sweet, sour, tart, sharp, aromatic and spicy. You may wince or moan or scream. You may see stars. Fine juicy flesh is firm yet tender and distinctly yellow. Medium-sized round-oblate-conic fruit is very dark solid maroon—nearly black. Occasionally found in old Maine orchards. The tree is vigorous, bearing young and regularly. Ripens in fall and keeps until the beginning of the year. Its one drawback is scab susceptibility. We grow it anyway. Blooms early-midseason. Z4-8. **ME Grown.**

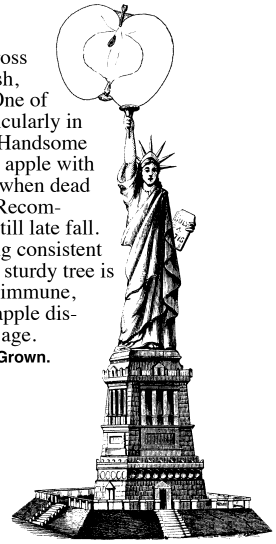
160A King David, $30.25

Kingston Black Fall. Bittersharp cider apple. Unknown parentage. Somerset, England, early 19th c. High in tannin and acidity. (SG 1.061, acidity 5.8g/L, tannin 1.9g/L) Produces full-bodied vintage cider with a nice blend of acid, tannins and sugar. One of the few varieties that makes a high-quality *single variety* hard cider, also good in a blend. We've become fans of Farnum Hill's tasty Kingston Black varietal. Now we make it ourselves. Also makes superb fresh cider. Even the fresh juice is a deep rich dark color. Medium-sized conical beautiful rich red fruit is mottled with red russet and deeper shades of maroon. Fairly decent fresh eating. The tree is a reliable bearer, but is gangly and needs careful pruning. Blooms midseason. Z4-6. Both **ME Grown.**

161A Kingston Black, $30.25
161C Kingston Black on M111, $30.25



ME Grown = grown in Maine at one of our small local nurseries



Liberty Late Summer-Fall. NY 55140-19 [Macoun x PRI 54-12 (PRI Co-op complex cross includes Rome Beauty, Jersey Black, McIntosh, Wealthy and *M. floribunda*)] NY Stn, 1978. One of the best of the disease-resistant varieties, particularly in the Northeast. Somewhat similar to Macoun. Handsome medium-sized round-conic bluish-pinkish-red apple with crisp white flesh of very good dessert quality when dead ripe. Excellent cooking and sweet cider, too. Recommended for single-variety sweet cider. Keeps till late fall. Begins fruit production at an early age, bearing consistent heavy annual crops. Naturally well-structured sturdy tree is easy to care for. Considered to be 100% scab-immune, though not resistant to insects or other lesser apple diseases. Don't let it crop too heavily at a young age. Blooms early to midseason. Z4-6. All are **ME Grown.**

162A Liberty, $30.25
162B Liberty on B118, $30.25
162C Liberty on M111, $30.25
162E Liberty on V1, $30.25

Maiden Blush Late Summer-Early Fall. Unknown parentage. Most likely originated in New Jersey, well before 1800. Classic all-purpose apple historically grown in thousands of farm orchards throughout New England. One of the first varieties to be grafted in Maine. Large round-conic yellow fruit, each with a rosy pink "maiden's blush." Ripens over several weeks beginning in September. You're never inundated with all the fruit at once. Fine grained, moderately crisp, tender, very juicy and subacid. Good quality especially for culinary uses: pies, sauce or sautéed. Our scionwood originally came from Valerie Desrochers in Saco, ME. Her old tree was planted by her grandfather in about 1890, and her mom always called it the Apple Pie Tree. Blooms mid-late season. Z5-7. **ME Grown.**

165A Maiden Blush, $30.25

Major Early Fall. Full bittersweet cider apple. Probably originated in central Somerset County, England, before 1900. Sweet, soft, woolly, juicy and bitter. (SG 1.054, acidity 1.8g/L, tannin 4.1g/L) Recommended for combining with other early cider varieties such as Ashton Bitter, Ellis Bitter and Nehou. Medium-sized pinkish-rosy-red roundish-oblate-conic fruit, sometimes ribbed and usually featuring a small yellowish russet splash around the stem. One of the English varieties now becoming popular in the U.S. Vigorous tree with a good central leader and a spreading branching habit. Similar to other Jersey-type cider varieties. Scab resistant. Late blooming. Z4-6. **ME Grown.**

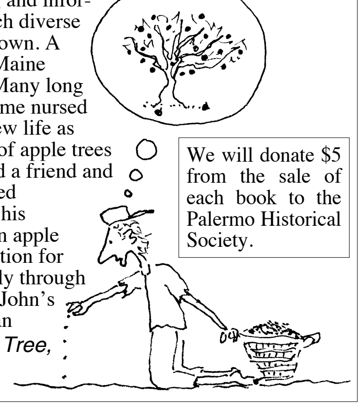
166A Major, $30.25

McIntosh Fall. Possibly a seedling of Fameuse or St. Lawrence. Dundela, Ontario, 1811. The most important apple in the Northeast. It grows to perfection in our cool climate. There are many strains of McIntosh, some striped, some blushed, some solid red. Recent strains have been selected for traits other than flavor, and the variety has gotten a bad reputation. This strain has green ground color overlaid with red stripes and blush. It was planted in 1906 in Mercer, ME. It has the best "Mac" taste. A delicious aromatic apple. Annual cropper. Large beautifully rounded spreading strong easily managed tree. Very susceptible to scab. Blooms midseason. Z4-5. All are **ME Grown.**

167A McIntosh, $30.25
167C McIntosh on M111, $30.25
167E McIntosh on V1, $30.25

Not Far from the Tree: A Brief History of the Apples and the Orchards of Palermo, Maine, 1804-2004 by John Bunker, 200 pages, 8½ x 11, softcover. John reveals how he came to know so much about apples—he spent years talking to his neighbors in Palermo, listening to their stories and walking their fields and orchards learning the varieties, how they came to be planted there and why. His engaging narrative and entertaining and informative drawings take us into the rich diverse past of a seemingly unremarkable town. A wonderful lesson in the history of Maine agriculture told in the apple trees. Many long abandoned and all but forgotten, some nursed back to health, and some finding new life as scionwood that begets generations of apple trees from Fedco. John is a colleague and a friend and I confess that I am not a disinterested reviewer. I even have a tiny part in his story—I taught him how to make an apple pie. John's love of apples and affection for his neighbors and town speak clearly through each page. Copiously illustrated in John's unmistakable style. –David Shipman

L627A Not Far from the Tree, $22.00



We will donate $5 from the sale of each book to the Palermo Historical Society.

Medaille d'Or Late Fall. Full bittersweet cider apple. Unknown parentage. Developed by a Mr. Goddard of Boisguillaume, Rouen, France, probably mid-19th c. The gold medal of cider apples, introduced into England in 1884. Full bittersweet, high in bitterness and astringency. (SG 1.053–1.059, acidity 27%, tannin 64%) Use it in combination with other late varieties. Small-to-medium roundish-conic yellow fruit mostly covered with a netting of golden russet and sometimes featuring a soft reddish blush. Wide spreading vigorous tree with good branch angles. Scab resistant but said to be susceptible to fireblight. Blooms late season. Z4-7. **ME Grown.**

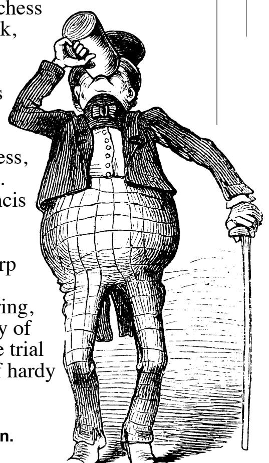
168C Medaille d'Or on M111, $30.25

Nehou Fall. Full bittersweet cider apple. Unknown parentage. Probably Nehou, France, before 1900. Soft, juicy, low-acid, sweet and astringent. (SG 1.057, acidity 1.7g/L, tannin 6g/L) Not as bitter as Dabinett and Harry Masters Jersey. Medium-sized somewhat oblate and oblique yellow fruit with a reddish blush and some striping. Presumably originated near Nehou on northwest coast of Normandy although there are no records of a French variety by that name. Likely renamed Nehou when it was brought to England by HE Durham in the 1920s and popularized by HP Bulmer's cider company. Renaming apples has been a tradition for centuries! Introduced to the states in 1949. Eric Shatt provided the scionwood. Blooms mid-late season. Z4-7. **ME Grown.**

170C Nehou on M111, $30.25

New Brunswicker Late Summer. Thought to be a Duchess seedling. Francis Peabody Sharp intro, Upper Woodstock, NB, Canada, about 1855. An excellent all-purpose extremely hardy variety for pies, sauce and everything else. Highly recommended for the northern grower. This is among the best. Medium-sized roundish fruit, red blushed and striped with a lot of light yellow ground color showing through. Sometimes confused with Duchess, but in our orchard New Brunswicker ripens a week later. Selected by the great plant breeder and nurseryman Francis Peabody Sharp (1823-1903) who operated the largest orchards and the largest nurseries in North America less than ten miles across the border from Houlton, ME. Sharp was largely responsible for apple growing in Aroostook County. Employing between 20 and 50 grafters each spring, he was setting out as many as 300,000 trees a year, many of them destined for northern Maine. He maintained a huge trial orchard of seedlings of thousands of crosses in search of hardy varieties of plums and apples. Scionwood for our trees originally came from Eugene Jackins of Houlton. Not susceptible to scab. Blooms early season. Z3-6. **ME Grown.**

171A New Brunswicker, $30.25



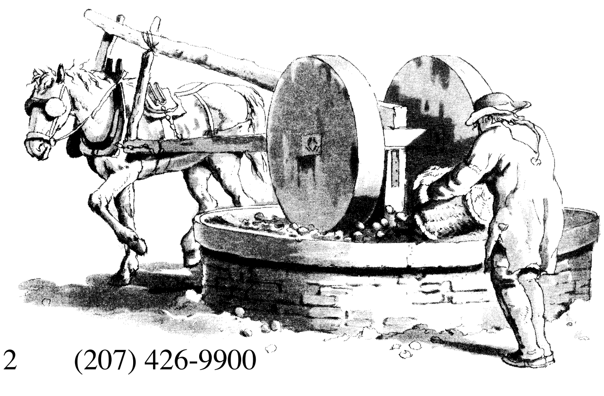
Northern Spy Winter. Chance seedling. East Bloomfield, NY, about 1800. One of the most famous of all heirloom apples. Very large delectable all-purpose fruit, covered with pink and light red stripes. Very juicy and tender. Even when the thin skin bruises, the fruit keeps extremely well. Cooks up quickly into a loose mild sauce. No need to remove the skins. Its reputation as a pie apple is well deserved: makes a very good single-variety pie! Its one drawback is being slow to come into bearing, although for us it's been worth the wait. Medium-to-large moderately vigorous long-lived tree. Good scab resistance. Leafs out late and blooms late season. Z4-6. Both **ME Grown.**

172A Northern Spy, $30.25

172C Northern Spy on M111, $30.25

Porter's Perfection Late Fall. Medium bittersharp cider apple. Charles Porter intro, East Lambrook, near Kingsbury Episcopi, Somerset, England, before 1900. Heavy cropper of small dark red-blushed fruit. (SG 1.054, acidity 8.2g/L, tannin 2.5g/L) Liz Copas writes that it "can produce an excellent cider. Its juice is rather acidic bittersharp and is better blended for a more balanced product." When I meet cidermakers, I always ask them about their favorite varieties. Eric Shatt of Redbyrd Orchard Cider in the Finger Lakes region of New York replied, "Porter's Perfection." Redbyrd's website calls it an "excellent balance of tannins and acidity." Often produces twins or triplets—two or more fruits fused together. Similar to the excellent Lambrook Pippin; the two varieties are thought to be of same parentage. Scab resistant. Blooms midseason. Z4-7. **ME Grown.**

174A Porter's Perfection, $30.25



Where can I taste that apple?

While we pride ourselves on our variety descriptions, there's nothing like the real thing. No words can compare to the taste. Frequently I'm asked, "Where can I taste a ….?" Here are a few suggestions.

Apple-tasting opportunities in Maine:

- **Aroostook Apple Day**, Saturday, October 7, 2017, at the Unitarian Church in Houlton, ME.
- **Great Maine Apple Day**, Sunday, October 15, 2017, at MOFGA in Unity.

Visit the orchards near you. There are many great orchards all over "Fedco Nation." If you know of any we should list, please let us know.

Maine:

Contact the Maine Dept of Agriculture at (207) 287-3491 or online at getrealmaine.com for a complete list of the orchards in Maine. Many have unusual varieties. Even one or two rare finds can be worth the trip. Below are some orchards with good collections. There are others, too. Don't be frustrated if you call and reach no one. Just go. By September most of them are open 6 or 7 days a week.

- The Apple Farm, Fairfield, Somerset County (207) 453-7656. A great collection of unusual old and new varieties.
- Bailey's Orchard, Whitefield, Lincoln County (207) 549-7680. One of the largest collections of old varieties in the state. Pears, plums and crabapples, too.
- Cayford Orchards, Skowhegan, Somerset County (207) 474-5200, cayfordorchards.com. Fifty-seven new and heirloom varieties of tree fruit on a sixth-generation family farm.
- Doles Orchard, Limington, York County (207) 793-4409, dolesorchard.com. Mix of old and new. They have two un-named varieties crossed by the late Maine plant breeder Russell Bailey. Both are extremely rare, if not unique.
- Lakeside Orchards, Manchester, Kennebec County (207) 622-2479, lakesideorchards.com. Organic apples and a good collection of mostly new varieties.
- Maine-ly Apples, Dixmont, Penobscot County (207) 234-2043, mainelyapples.com. Excellent collection of old, new and rare varieties.
- Ricker Hill Orchards, Turner, Androscoggin County (207) 225-5552, rickerhill.com. Organic apples and more, mostly modern varieties.
- Rollins Orchard, Garland, Penobscot County (207) 924-3504, rollinsorchards.com. A very good collection of over 20 unusual old varieties. Plums and pears, too.
- Sewall Orchard, Lincolnville, Waldo County (207) 763-3956, sewallorchard.com. Organic apples including some of the first disease-resistant releases.
- Sweetser's Apple Barrel and Orchards, Cumberland Center, Cumberland County (207) 829-6599, maineapple.com. A great collection of 39 old and new varieties. Don't miss their Rolfe apples.

Other northeastern states:

- Bear Swamp Orchard, Ashfield, MA (413) 625-2849, bearswamporchard.com. Organic U-pick apples and hard cider.
- Nashoba Valley Winery, Bolton, MA (978) 779-5521, nashobawinery.com. A very large collection of old and new varieties.
- Old Sturbridge Village, Sturbridge, MA (508) 347-0290, osv.org. Rare heirloom apple tree collection.
- Tower Hill Botanic Garden, Boylston, MA (508) 869-6111, towerhillbg.org. The best collection of historic varieties in southern New England. A great place to study the fruit. Usually for sale at a special event on Columbus Day weekend. Call ahead.
- Alyson's Orchard, Walpole, NH (603) 756-9800, alysonsorchard.com. Large collection of new and old varieties.
- Gould Hill Orchard, Contoocook, NH (603) 746-3811, gouldhillfarm.com. Large collection of new and old varieties.
- Lost Nation Orchard, Groveton, NH, michael@herbsandapples.com. Many unusual varieties.
- Poverty Lane Orchards, Lebanon, NH (603) 448-1511, povertylaneorchards.com. One of the best collections of unusual dessert apples in New England. One of the largest collections of cider apples in the U.S. They have most of the cider varieties we sell.
- LynOaken Farms, Lyndonville, NY (585) 765-2046, lynoakenfarms.com. 350 varieties new and old.
- Connecticut Valley Orchard, Westminster, VT (802) 722-3340. Large selection of new and old varieties.
- Scott Farm Orchard, Dummerston, VT (802) 254-6868. More than 120 heirloom and unusual apple varieties, plus other fruits.
- Windfall Orchard, Cornwall, VT (802) 462-3158. More than 80 varieties of fruit: apples, pears, plums, cherries and quince.

Redfield Fall. Wolf River x Niedzwetzkyana. NY Stn, 1938. One of the best and largest of the red-fleshed apples. Although usually considered way too tart for eating out of hand, the medium-large fruit with opaque solid rusty-red skin is absolutely great in pies. It makes wonderful jelly and turns sauce and cider red. Gained fame in the hard-cider world thanks to the wonderful single-variety Redfield cider and Redfield blends made by the late Terry Maloney of West County Cider. Very sharp and bitter in cidermakers' lingo. (SG 1.052) Flesh is two-toned: deep pink fading to white around the core. The flowers are also two-toned, deep pink, tipped with small white lightning bolts. And the bronze-red foliage adds further interest all season. Bears young and shows some insect resistance in our trials. Sometimes listed as a crabapple, but don't be fooled: the apples are the size of Macs. One of the very first to bloom each year. Z3-6. **ME Grown.**

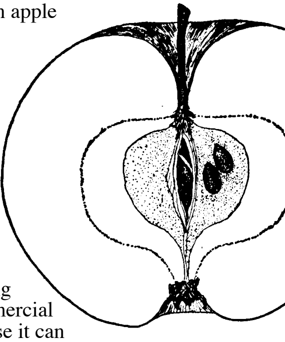
178C Redfield on M111, $30.25

Rhode Island Greening Fall-Winter. Green's Inn, near Newport, RI, about 1650. Also known as **Greening**. The classic New England cooking apple. Large roundish-conic-oblate green fruit often has a tannish blush. Light yellow-green flesh is crisp and tart. Great for pies, also excellent for fresh eating. The number one *green* apple for a few centuries before Granny Smith arrived from Down Under and stole the show. The most well-known of the various Greenings. Because of its high-quality fruit and adaptability to a range of soil conditions, Rhode Island Greening established itself as one of the most important commercial varieties throughout the Northeast in the 19th c. Keeps well into winter. About as hardy as Baldwin. Old trees can still be found in central Maine. Not recommended for northernmost districts, but cooks everywhere else should love it. Late-season bloomer. Z4-7. **ME Grown.**

182A Rhode Island Greening, $30.25

Ribston Pippin Fall-Winter. Ribston Hall, Yorkshire, England, about 1700. Famous as an exceptional dessert apple. Medium-large roundish-oblate fruit is covered with an incredibly beautiful swirl of reds, oranges and russets. One of the best for fresh eating from late fall to early January. Sharp, crisp, rich and aromatic. Dried, it has an intense rich flavor. Recommended as an acid source for cider. Sometimes you find watercore in the fruit, an indication of elevated sugar content. Likely the parent of the renowned Cox's Orange Pippin. One of the first English varieties to thrive here in America, probably brought over by Benjamin Vaughan just before the Revolution. Vaughan grew it on his farm in Hallowell, ME. *The Maine Farmer* reported in 1854 that Ribston "does better in Maine than any where in the U.S." Blooms midseason. Z4-7. **ME Grown.**

183A Ribston Pippin, $30.25

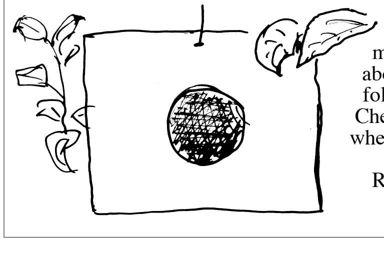


Roxbury Russet Winter. Roxbury, MA, early 1600s. Said to be the first named American apple variety. One of the best late-winter dessert apples—it would be hard to live without a stash of them in our root cellar. Hard medium-large patchy green and russeted fruit not uniform in size, shape or color. Rich, spicy and juicy. Exceptional sauce. Dried, it's nice and tart with a pleasant first sensation and a lingering good aftertaste. The aromatic juice is recommended by some for cider, fresh or fermented. Medium-to-large vigorous spreading tree. One of the most popular commercial apples of the 19th c., largely because it can store until summer. Scab resistant. Blooms midseason. Z4-6. Both **ME Grown.**

184A Roxbury Russet, $30.25
184C Roxbury Russet on M111, $30.25

Apple Maggot and plywood

The late Don Johnson made nifty apple maggot traps. We've gotten into doing so ourselves. In small orchards, the traps alone may be enough to reduce the AM pressure to a tolerable level. Here's how: Cut up plywood (3/8" or 1/2") into 8x11" rectangles. Drill a hole along the top edge. Paint the plywood bright yellow with a 2–3" red spot (the apple) in the center. Coat with Stiky Stuff (an adhesive available at Fedco's Organic Growers Supply) and hang three in each tree in mid-June, positioning the traps at about chest height. Trim away any foliage that might stick to the trap. Check for AM flies. Now and then, when they get too gooky, scrape the traps and add new Stiky Stuff. Remove traps around Labor Day.



Somerset Redstreak Early Fall. Medium bitter-sweet cider apple. Thought to be from the Sutton Montis area, Somerset, England, probably before 1900. Old variety that has become popular in modern English cider orchards. Ripens in mid-late September in central Maine. Makes a good single-variety cider but would be best blended with other early fall apples. Juicy and astringent. Sometimes watercores, but fret not: that just means more sugar to ferment. (SG 1.050; acidity 0.19%; tannin 0.35%) Medium-sized roundish-conic fruit, greasy skinned, striped and blushed shiny red. Tree has an upright growth habit; may require heading back the central leader in early years to develop strong lateral branches. Considered a heavy cropper. Midseason bloomer. Z4/5-7. **ME Grown.**

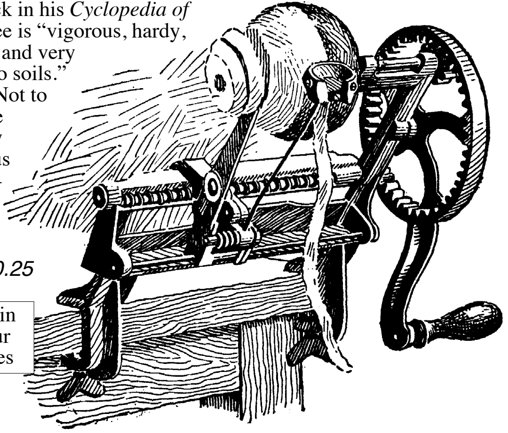
186A Somerset Redstreak, $30.25

Spice Sweet Late Summer. Massachusetts, early 1800s. One of the best of all pie apples. Well named. The orangey-colored cooked fruit is packed with spiced flavor! Rather low in acid, unusual for a pie apple. Most sweet apples are terrible in pies, but Spice Sweet is exceptional. Very good fresh eating as well. Medium-size lumpy red fruit resembles Northern Spy. Laura Childs rediscovered it in 2011 in Belgrade, ME, on the old Bickford Farm. The Bickford grandparents always called it Old Spice. There are historical records of multiple apples with the name Spice Sweet or Spice Sweeting. This one is likely the Spice Sweeting described by Dr. John Warder in 1867. Probably blooms midseason. Z4-7. **ME Grown.**

187A Spice Sweet, $30.25

Stark Winter. Delaware County, OH, about 1850. Rugged high-quality all-purpose winter storage variety keeps beautifully in the root cellar until April. Large blocky dull reddish green fruit, sometimes confused with Baldwin. Hardier than Baldwin. Commonly grown commercially in northern districts 100 years ago. Trees can still be found in central Maine. Not of Baldwin dessert quality, but very good for cooking and drying. Ruth Smith from York Harbor wrote to me years ago about Stark: "I was always amazed at the color and thickness of the applesauce. I had to add a lot more water than the usual apple needed. It was very tart applesauce." According to Hedrick in his *Cyclopedia of Hardy Fruits*, the tree is "vigorous, hardy, healthy, productive, and very accommodating as to soils." Keeps until spring. Not to be confused with the Maine apple Starkey (**189A**) or the famous Stark Brothers' Nursery in Missouri. Midseason bloomer. Z4-6. **ME Grown.**

188A Stark, $30.25



ME Grown = grown in Maine at one of our small local nurseries

Fedco Cider T-shirts: "It's Always OK to Be Bitter"

Celebrate your favorite fall drink with our popular cider T-shirt, featuring John Bunker's full-color paintings of ten of the most famous English, French and American cider apples. Printed at Maine's own Liberty Graphics.

Crewneck T-shirts These are your standard relaxed-fit tees. 100% organic cotton grown in the U.S. Some sizes are white, some natural color.

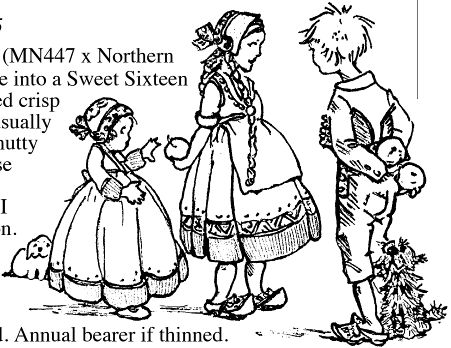
L625A Crewneck natural T-shirt, S, $18.00
L625B Crewneck natural T-shirt, M, $18.00
L625C Crewneck white T-shirt, L, $18.00
L625D Crewneck natural T-shirt, XL, $18.00
L625E Crewneck white T-shirt, 2XL, $18.00
L625F Crewneck white T-shirt, 3XL, $18.00

Fitted T-shirts Trim fit style with scoop neck, made from soft light grey 100% cotton.

L626A Fitted scoopneck T-shirt, S, $18.00
L626B Fitted scoopneck T-shirt, M, $18.00
L626C Fitted scoopneck T-shirt, L, $18.00
L626D Fitted scoopneck T-shirt, XL, $18.00

Starkey Fall-Winter. Seedling of Ribston Pippin. Moses Starkey intro, Vassalboro, ME, about 1800. Exceptionally delicious late fall to early winter dessert apple. In the same league as its parent Ribston Pippin and its probable half-sibling Cox's Orange Pippin. Medium-sized roundish-oblate fruit is almost entirely rosy red blushed and striped, then sprinkled with prominent white dots. Off-white flesh is juicy, tender, crisp, mild, lively and subacid. Rediscovered in 1998 on the farm of Sue and Walter Ernst in Vassalboro, ME, with the help of orchardist and life-long Starkey fan, the late Frank Getchell of Vassalboro. A second tree was later discovered in Vassalboro with the help of Bob Clark. In recent years we have also discovered trees farther afield in the Maine towns of Bowdoinham and Industry. Not to be confused with Stark (**188A**). Blooms early midseason. Z4-7. **ME Grown.**

189A Starkey, $30.25



Sweet Sixteen Fall. MN 1630 (MN447 x Northern Spy) U Minn, 1979. The first bite into a Sweet Sixteen is always a surprise. Fine-textured crisp flesh contains an astounding unusually complex combination of sweet, nutty and spicy flavors with slight anise essence, sometimes described as cherry, vanilla or even bourbon. I always love Sweet Sixteen season. Truly excellent fresh eating, although it is too sweet for some palates. Round-conic bronze-red medium-sized fruit, striped and washed with rose-red. Annual bearer if thinned. Very hardy moderate-sized vigorous vase-shaped tree grows upright with willowy branches that get loaded with fruit but do not break. Best grown in northern districts. Keeps till midwinter. Some resistance to scab. Blooms mid to late season. Z3-6. **ME Grown.**

191A Sweet Sixteen, $30.25

Tolman Sweet Fall-Early Winter. Sweet Greening x Old Russet. Dorchester, MA, before 1700. Sometimes called **Talman Sweet**, **Taulman Sweet**, **Tomey Sweet** and many variations. One of the first American apples and one of the few to remain popular for centuries. Truly an all-purpose fruit, used for cider, cooking, dessert and even animal fodder. Once popular for pickling, boiling and baking. Especially prized in Maine for apple cake. Unforgettably peculiar sweet strange flavor. Very low acidity. Moderately juicy medium-sized greenish fruit, sometimes with a bit of a blush and often marked by a suture line running from stem to stern. Long-lived heavy-bearing vigorous tree. Still often found throughout central and southern Maine. Blooms midseason. Z4-6. **ME Grown.**

192A Tolman Sweet, $30.25

Tumanga Fall-Winter. Cox's Orange Pippin x Schoner von Nordhausen. Kaiser Wilhelm Institut, Muncheberg, Germany, 1930. Crisp, juicy and sweet, this intense aromatic rich dessert and juice apple resembles Cox's Orange Pippin. Medium-sized round-to-oblate yellow fruit, half covered with a dusty mauve-red overcoat and a large ring of russet radiating out from the stem. Called *Auralia* in Germany, where it has been grown primarily for its excellent juice. Another of the fine varieties brought into the light for us by Mark Fulford of Monroe, ME, who also introduced us to Hudson's Golden Gem (**155A**) and Redfield (**178C**). Not susceptible to scab. Stores until midwinter. Late midseason bloomer. Z5-8. **ME Grown.**

195A Tumanga, $30.25

Twenty Ounce Fall. Cayuga, NY, before 1845. Very large (20 ounces!) high-quality pie and general cooking apple. Sometimes mistakenly called Twenty Ounce Pippin. Huge roundish fruit is mostly red-and-orange striped and slightly greasy. Fills the October niche between the early season and the late season cooking apples. Tasty and perfectly textured in a pie. Your crust will never sink. Tart sauce cooks up medium-fast. Very good dried. Can be as big as a Wolf River (**205A**) and some orchards confuse the two, but they are quite different. Twenty Ounce never has a large russet splash around the stem. Wolf River is considerably more oblate (flattened) and pinker. We still find old Twenty Ounce trees here and there in central and northern Maine. Blooms early midseason. Z4-7. Maybe even Z3. **ME Grown.**

196A Twenty Ounce, $30.25

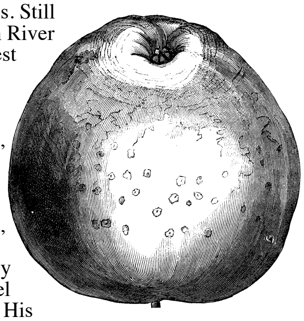
If you missed any of the past installments of the orcharding sidebars and would like hard copy back issues, we have extra copies of the 2013 through 2017 catalogs. Send a request. They are $5 apiece.

Washington Sweet Fall. Unknown parentage. Probably from Sidney, ME, before 1850. A true low-acid sweet apple suitable for baking and fermented cider. Large round-conic fruit, sometimes with a serious red blush and always mostly covered with russet. Its peculiar taste is just what the cidermaker ordered. Would be classified as a mild bittersweet. (SG 1.058) Productive and reliable. Introduced to me by Earland Goodhue (1915-2009). Earland was a Sidney, ME, dairy farmer with a small orchard of more than a hundred varieties. He told me he never cared much for Washington Sweet but knew it was rare and didn't want to let it go. We love it. Could be a synonym for another Sidney heirloom apple, Bailey Golden. Blooms midseason. Z4-7. **ME Grown.**

198A Washington Sweet, $30.25

Wealthy Fall. Cherry crab seedling. Excelsior, MN, 1860. A Maine native of sorts, the seed having come from Bangor. Superb all-purpose fall apple, one of the most famous of all hardy varieties. With its perfect texture and complex flavors, Wealthy is considered to be one of *the* best apples. I agree. Round-oblate medium-sized fruit is pale greenish-yellow streaked with carmine. About as firm as McIntosh. Tender very juicy sweet subacid flesh is white, often stained red. Good eating and even better cooking. Wonderful pies! Good acid source for fermented cider. Ripens over a long period. Productive moderately vigorous long-lived small- to medium-sized tree. Blooms early. Z3-5. **ME Grown.**

199A Wealthy, $30.25



Westfield Seek-No-Further Fall. Westfield, MA, mid-18th c. One of the most famous of all heirloom dessert apples. Still loved by anyone who knows it. A Hudson River grower of 200 varieties declared it "the best apple in the world." Medium-sized roundish-conic fruit is dull rusty red, yellow, conspicuously dotted and sometimes russeted. Highly flavored, rich, a little bit sweet, a little bit sour, firm, crisp and juicy. It has everything. *The Apples of New York* calls it "rich, sometimes astringent, peculiarly aromatic, sprightly, very good to best." Also an outstanding drying apple. Keeps until early winter. Hardier tree than Baldwin. Michael Clark of Knox, ME, provided scionwood. His ancient tree is a sight to behold. Blooms midseason. Z4-6. **ME Grown.**

200A Westfield Seek-No-Further, $30.25

Wickson Fall. Esopus Spitzenburg x Newtown Pippin. Albert Etter intro, Humboldt County, CA, 1944. One of the most intensely flavorful apples we list. Small roundish bright red fruit is crisp, juicy, tart, tangy and spicy. Extremely high in both sugar and acid. Sugar level of the juice is around 25%. Highly recommended for dessert. Keeps until January. Becoming one of the most sought-after American cider apples, both for blending and as a single varietal. In September the tree looks like a mass of cherries. Bred and introduced by the generally unknown Albert Etter, one of America's most innovative and important fruit breeders of the 20th c. Wickson bears young, heavily and annually. Blooms midseason. Z4-8. Both **ME Grown.**

201A Wickson, $30.25

201C Wickson on M111, $30.25

Maine Heritage Orchard Stewardship Apple The Maine Organic Farmers and Gardeners Association (MOFGA) recently established the Maine Heritage Orchard in a renovated gravel pit in Unity. The terraced polyculture orchard will be unlike any orchard anywhere. Under the direction of Fedco's John Bunker, 270 apple trees have been planted so far with many more to follow. You can join in this effort by becoming an Apple Steward. By purchasing a Heritage Orchard Stewardship Apple, you become the proud keeper of one of the varieties represented in MOFGA's orchard. In the event that the orchard's tree dies, you'll have the backup so we can collect scionwood for grafting another. We'll send you a rare historic apple tree with a description if it's not listed in this catalog, and a form to fill out. After planting your tree, you return the form with the tree's location to MOFGA. MOFGA will contact you from time to time. $30 from the sale of each tree goes to support the Maine Heritage Orchard (MeHO) project. For more information go to mofga.org. All trees best grown from Z4-6. **ME Grown.**

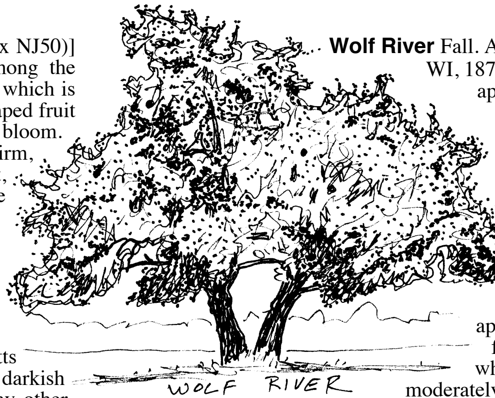
225A Stewardship Apple, $50.00

Williams Pride Summer. Co-op 23 [PRI 2845-1=(PRI 1018-101 x NJ50)] PRI Co-op, 1988. Probably the most popular summer apple among the newly developed disease-resistant introductions. It's actually crisp, which is rare for a summer apple. Deep purple roundish-conic irregularly shaped fruit highlighted with areas of glowing rosy red and covered with a thin bloom. Light cream-colored flesh with red staining just under the skin. Firm, crisp and very juicy. Has a nice acidic blend of tart and sweet, reminiscent of Fameuse. Long ripening period means you don't have to eat them all at once. Vigorous annually bearing tree with some biennial tendency. Well shaped with strong right-angled branches that do not require careful training. Highly resistant to fireblight, cedar apple rust and sooty blotch; resistant to powdery mildew. Scab immune. Blooms early to midseason. Z4-7. **ME Grown.**

202A Williams Pride, $30.25

Windham Russet Late Fall. Parentage unknown. Massachusetts before 1870. Excellent dessert apple for the connoisseur. The darkish brown russet skin has a distinctly bumpy rough texture, unlike any other russet we know. The stem area is sometimes lipped like Pewaukee. We brought it to the Franklin County CiderDays apple tasting in November 2013 and it won, beating out some really great apples. First brought to the attention of the Maine Pomological Society by DJ Briggs in 1885. ZA Gilbert, longtime president of the society, struggled to identify the apple. His best guess was Windham Russet. He wrote, "I have spent much time in search of a pointer to the identification of this variety. So choice a russet is worthy of attention." We agree. Said to be from Massachusetts although there is no Windham down there. Maybe it's the Windham in Connecticut, New Hampshire, Vermont or Maine. This apple is making a big comeback. Blooms midseason. Z4-7. **ME Grown.**

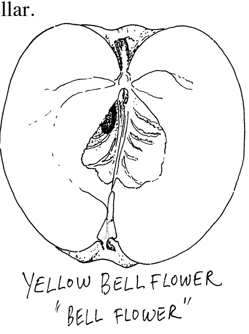
203A Windham Russet, $30.25



Wolf River Fall. Alexander seedling. Near Wolf River, WI, 1875. Perhaps the most famous old-time apple in Maine, likely due to its catchy name and its extremely large—even huge—round-oblate fruit. Pale yellow-green skin mostly covered with pink, deep red and bright crimson with a vivid yellowish-greenish russety splash around the stem. Creamy-white coarse firm but tender flesh. Aromatic subacid flavor is very good for cooking. Makes an excellent baked apple and a decent pie. Not much good for fresh eating, but particularly tasty when dried. Keeps until late fall. Large moderately vigorous productive spreading tree. Excellent scab resistance. Blooms mid to late season Z3-5. **ME Grown.**

205A Wolf River, $30.25

Yellow Bellflower Winter. Unknown parentage. Crosswicks, Burlington County, NJ, about 1742. Large conical pure-yellow fruit does everything well, including keeping all winter in the root cellar. Firm, crisp, moderately fine-grained, rather tender, juicy, aromatic, very good for culinary use and good for fresh eating, especially after it's mellowed for a month or two. Excellent for pies. Applesauce cooks quickly, somewhat coarse, bright glistening yellow with great flavor and chewy skins. We also love it dried: it's balanced and flavorful. One of the first named American varieties and one of the first apples to be grafted and planted in Maine. Incredibly long-lived. When you find a truly ancient apple tree in Maine, there's a pretty good chance it'll be a Yellow Bellflower. Blooms early-midseason. Z4-7. **ME Grown.**



206A Yellow Bellflower, $30.25

Yellow Transparent Summer. Unknown parentage. Russia, probably before 1800. Brought to the U.S. in 1870 and quickly spread throughout Maine. One of our most-requested varieties. Medium-sized light yellow fruit has a tender skin you can almost see through. Tart fresh eating and cooks up into a flavorful slightly tart light yellow sauce in 6–7 minutes. Skip the sugar. Skins will dissolve in your mouth as you eat. Transparents ripen fairly early in August and beware: they come mostly all at once and go by quickly. Get the sauce pot ready and don't blink or you might miss them. It's okay to eat or cook them a little on the green side. When the first of them fall to the ground, pick the rest within a week or so. Incredibly hardy. Blooms midseason. Z3-6. **ME Grown.**

207A Yellow Transparent, $30.25

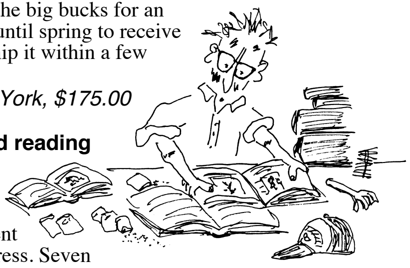
Zestar Late Summer. (State Fair x MN 1691) U Minn, 1999. Extremely hardy high-quality mid-late summer dessert apple. Medium-sized blocky round fruit covered with red stripes and blush. Juicy and crisp with a well-balanced acid/sweet flavor. Michael Phillips, New Hampshire orchardist and author of *The Apple Grower*, said to me, "When you tree-ripen Zestar, it's fabulous." Northern Maine orchardist Steve Miller added, "That's an impressive apple. From the standpoint of appearance and quality, they're first rate." Keeps in cold storage up to seven weeks. Tree has moderately vigorous upright form; excellent horizontal branching habit makes it easy to train and prune. Precocious and annual-bearing. Blooms early season. **PVP**. Z3-5. **ME Grown.**

208A Zestar, $30.25

PVP = Plant Variety Protected. Unauthorized propagation of the plant is prohibited. The use of PVP in the catalog is for informational purposes only and does not constitute an endorsement by Fedco of plant patenting.

The Apples of New York by Spencer Ambrose Beach, 1905. 2-volume set, 764 pages, hardcover. This two-volume encyclopedia of apples grown throughout the U.S. before 1900 is an essential text for apple enthusiasts. I refer to Beach almost every day of the year. Don't be misled by the name—it's not just about New York. Although it misses many of our obscure local varieties, Beach covers hundreds of the most important historic varieties you'll come across. It's not a searchable key, but it is fantastic with good-to-excellent histories, detailed descriptions and color images. Volume one includes a general history of apples and an explanation of relevant terminology related to apple identification. Original sets of *The Apples of New York* are still out there although prohibitively expensive for most folks. We're offering a very decent hardcover reprint—good for those who want to go easy on their old copy, and great for those who can't lay out the big bucks for an original edition. No need to wait until spring to receive *The Apples of New York*. We'll ship it within a few weeks of receiving your order.

L628A The Apples of New York, $175.00



Bunker's bookshelf: required reading for fruit enthusiasts

The Illustrated History of Apples in the United States and Canada by Daniel J. Bussey, edited by Kent Whealy, published by Jak Kaw Press. Seven volumes, hardback, 2017. For 30 years Dan Bussey systematically and meticulously transcribed and compiled more than 16,000 apple descriptions using hundreds of historic sources. Kent Whealy of Jak Kaw Press spent the past 7 years editing Dan's work into 7 volumes. This will be the most important book on apples ever published in English. There has never been anything like it. This is the book for orchardists, researchers, historians, nurserymen, collectors and dreamers. It is the ultimate apple reference encyclopedia with 16,350 descriptions illustrated with 1,400 magnificent historic USDA apple watercolors. We encourage you to purchase a set directly from the publisher. For details, go to: jakkawpress.com or call (844) 567-5888.

Apple Varieties in Maine by Frederick C. Bradford, 1911. A gold mine for northern New York and New England fruit explorers. You can download a free version at digitalcommons.library.umaine.edu. This was Bradford's masters thesis at UMaine. *Apples of Maine* by George Stilphen is a reprint of Bradford, but print copies are dear.

A View of the Cultivation of Fruit Trees by William Coxe, 1817. Essential reading for anyone interested in the early history of cider in the U.S. Descriptions of fruit varieties, primarily apples, and detailed information on cider. Many of the varieties listed are probably extinct. You may never locate an original edition of this book, but a good reprint was issued by Pomona Books in 1976. It can also be downloaded free at archive.org.

The American Orchardist by James Thacher, 1825. Of particular interest to those interested in early apple history. Descriptions of many American apples originating before 1800. Includes a great deal about cider. Highly recommended. A new reprint is available from Palala Press, and the entire text can be downloaded free at archive.org.

"Wild Apples" by Henry David Thoreau, 1862. This wondrous essay was first published in *The Atlantic*. Available online in *The Atlantic*'s archives, and a number of versions can be found in print, sometimes included in Thoreau anthologies. Find it and reread it every few months—it's that fantastic.

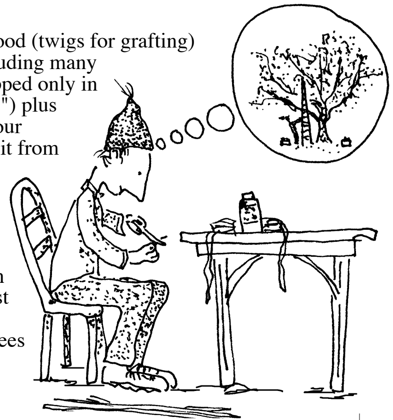
Fruit-growing websites

Whether you use organic or conventional orchard practices, several websites can provide you with a great deal of information about insect and disease pressure, spray timing, frost predictions and a whole lot more. Here are a few of the best:

UMaine Cooperative Extension:
umaine.edu/ipm/programs/apple/
Cornell University: fruit.cornell.edu/
University of Vermont:
uvm.edu/~fruit/
UMass Extension Fruit Program:
ag.umass.edu/fruit
Holistic Orchard Network:
groworganicapples.com/

Scionwood

We offer scionwood (twigs for grafting) from a wide selection of fruit trees including many listed in this catalog. Scionwood is shipped only in March. Price is $5.00 per stick (about 8") plus shipping. Rootstock can be sent with your scionwood order in March if you order it from the Scionwood form (pp. 37-38) or select that option online.



We sell scions (scionwood) in two ways. For those grafting up to 3 or 4 trees of a variety, one 8" stick will suffice. Each single 8" stick comes with a small paper ID label. This is how most of our customers purchase scions. For orchardists grafting large numbers of trees of a particular variety, we also offer scionwood by the foot ($4.50 per foot, minimum order of 10 feet). In our own nursery work, we are usually able to graft about 6 or 8 trees from one foot of scionwood.

The list of this year's scionwood offerings is on page 38. You'll find descriptions for these varieties on our website.

We collect the scionwood in winter and store it at about 40° until shipment in March. You can graft right away or store it for later use. Stored properly, it will keep quite well for several weeks. It needs to be kept in the fridge or in a cold dark basement, root cellar or shed. Storing scionwood at freezing temps can be okay (we have friends who stick theirs in a snow bank), but the *very* cold temperatures in a freezer will kill it. It will also die if it dries out or is stored without special protection from ripening veggies or fruits. We recommend *triple-bagging* your scionwood in plastic bags, no matter where you store it. There is no need to dampen the scionwood or to insert wet paper towels before bagging it.

- **Deadline** for ordering scionwood is **February 16, 2018.**
- Scionwood will be shipped to you around March 12.
- **Scionwood varieties** are listed on p. 38.

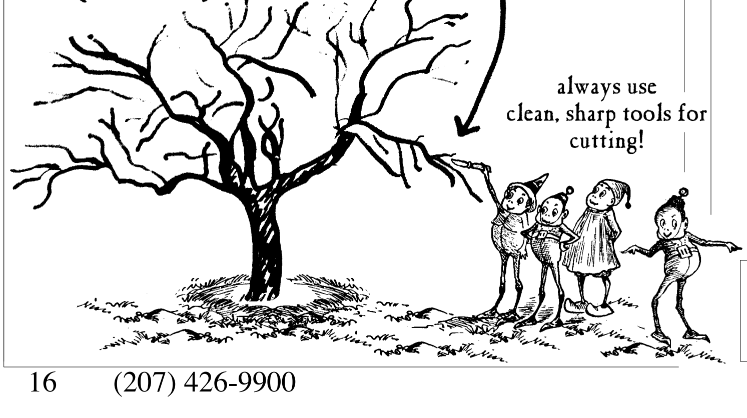
Scions are not trees!

Scions are twigs, not trees. They have no roots and will not grow if you plant them. They are cuttings from branch tips collected in the winter, intended for grafting in the spring.

Is grafting easy to do? Yes and no. It is an acquired skill. Experienced grafters often have 100% "take" (success rate) with their grafting. Beginners often have less than 50% take—or even zero. While you can learn to graft from a book or video, we highly recommend the old-fashioned way of learning: find a real person to teach you. MOFGA (Maine Organic Farmers and Gardeners Association) has grafting classes every spring. Other organizations around the country do as well.

There are two general ways to graft fruit trees in spring. You can **bench graft** by grafting scionwood onto bare-root rootstock. Generally we do this indoors in late March or early April. We keep the little grafted trees packed into a bucket of damp sawdust in a warm spot in the house (77–86°) to break dormancy and promote callus development. Then we harden them off in a cold (but not freezing) place for a week or two before planting out in the nursery in mid-to-late May. In a couple of years when the trees are 3–4' tall, we plant them in the orchard. You can grow your own rootstock from seed or purchase it from us. You can also **topwork** scionwood onto existing trees in your yard or orchard. We do our topworking after the trees have begun to show some green growth, usually about May 10 in central Maine.

Can you collect your own scionwood? Of course! Grafting can open up a whole new world for you. You can purchase scionwood from Fedco and several other suppliers around the country. You can trade scionwood like you would baseball cards or recipes. And, best of all, you can collect your own scionwood from your favorite trees. We're always on the lookout for interesting varieties to graft. Before long, you may even become completely obsessed like many of us at Fedco!


last season's growth
(dormant)
scionwood
always use clean, sharp tools for cutting!

Hardy Rootstocks

We consider these to be some of the best rootstocks for home or commercial use. Even without grafting, any of these produces fruit suitable for wildlife. For rootstocks not listed, or for larger calipers or larger quantities, please write for information. We also offer grafting supplies in the Organic Growers Supply section of the Seed catalog or online at **fedcoseeds.com**.

Please note! We do our best to provide 1/4" caliper stock. Because of factors beyond our control (such as weather!) stock may be 3/16–3/8". We cannot guarantee scion or rootstock diameter.

Because of the way they are propagated, clonal rootstocks (B118, M111, G11, B9 apples and OHxF97 pear) rarely come with more than a few roots.

You may order rootstock for shipment around March 12 by using the scionwood order form, available in this catalog, page 37. Rootstock ordered on the regular order form in this catalog, page 35, will be shipped with the rest of the Tree order in April. Both options are also available online.

***Malus* 'Antonovka'** (Apple) Hardy Russian seedling rootstock for full-sized "standard" apple trees. The hardiest rootstock we offer. Space trees 20–30' apart. Z3.

226A Malus Antonovka, bundle of 10, $29.50

***Malus* 'Budagovsky 118'** (Apple) [Moscow Pear x (M8 and M9 pollen)] Michurinsk College of Ag, Michurin, Russia. Also called **Bud 118** or **B118**. Semi-dwarf rootstock, about 85–90% of standard. Sometimes referred to as a "semi-standard" or even a standard. Space trees 20–25' apart. More productive and fruits sooner than trees on Antonovka. Very winter hardy and soil adaptable. Generally not used in commercial orchards due to its large size. Resistant to collar rot. Unknown susceptibility to fireblight. Z3.

227A Malus Budagovsky 118, bundle of 10, $29.50

***Malus* 'M111'** (Apple) [Northern Spy x Merton 793 (Northern Spy x East Malling11)] Collaborative intro of East Malling Research Stn and the John Innes Institute, Merton, England, about 1950. Technically named MM111, the MM refers to Malling and Merton. Very popular semi-dwarf rootstock produces a tree about 65–80% of standard. Space trees 15–20' apart. No staking necessary. Fruits at a slightly younger age than standards. Well anchored and adaptable to a wide range of soils. Woolly-aphid resistant. Not nearly as long-lived as standards. Hardy to Z4, maybe Z3.

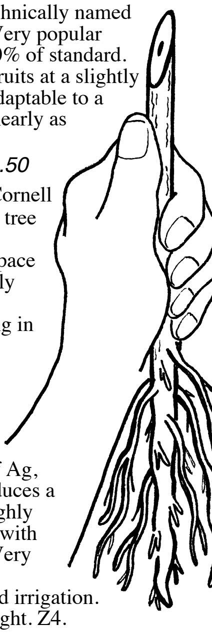
228A Malus M111, bundle of 10, $29.50

***Malus* 'Geneva 11'** (Apple) Also called **G11**. Cornell University intro, NY. Dwarf rootstock produces a tree about a third the size of standard, about halfway between M9 and M26 (a bit larger than Bud 9). Space trees 8–10' apart. Suckers only slightly. Moderately susceptible to woolly aphid. Excellent fireblight resistance. Requires staking, weeding and watering in most locations. Z4/5.

229A Malus Geneva 11, bundle of 10, $33.50

***Malus* 'Budagovsky 9'** (Apple) [M8 x Red Standard (Krasnij Standart)] Also called **Red-leafed Paradise** or **Bud 9**. Michurinsk College of Ag, Michurin, Russia, 1946. Dwarfing rootstock, produces a tree about a quarter the size of a standard tree. Highly productive and precocious (fruits at a young age) with high levels of soluble solids and large fruit size. Very hardy though not as hardy as Antonovka. In most locations, requires weeding, mulching, staking and irrigation. Space trees 5–10' apart. Some resistance to fireblight. Z4.

230A Malus Budagovsky 9, bundle of 10, $29.50



Prunus americana (Plum) Seedling rootstock for American, Japanese or hybrid plums. Also recommended for grafting peaches. Seedling plum produces very decent 1" fruit without grafting. The best pollinator for hybrid plums. (See explanation in plum section on page 22.) Z3.

231A Prunus americana, bundle of 10, $29.50

***Prunus avium* 'Mazzard'** (Cherry) The rootstock we use for grafting sweet and pie cherries. Shallow spreading root system. Longer lived than Mahaleb though not as hardy. Does not do well in heavy poorly drained soils. Z4/5.

232A Prunus avium Mazzard, bundle of 10, $29.50

***Prunus cerasifera* 'Myrobalan'** (Plum) Seedling rootstock for European plums. Not recommended for American or hybrid plums. Z3.

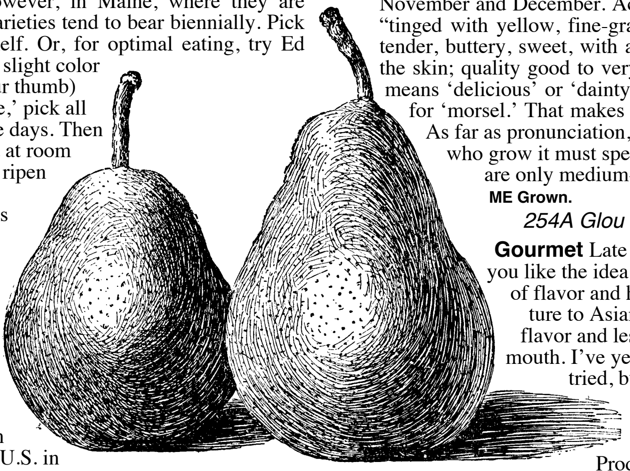
233A Prunus cerasifera Myrobalan, bundle of 10, $29.50

***Pyrus* 'OHxF97'** (Pear) (Old Home x Farmingdale 97) Produces a vigorous hardy well-rooted almost-standard-sized tree. Superior to *Pyrus communis* in numerous ways, and can be used for both European and Asian pears. We use "97s" for our Fedco catalog offerings. Z3/4.

234A Pyrus OHxF97, bundle of 10, $29.50

Please join us Sunday, March 25, 2018, at the Maine Tree Crop Alliance annual Scionwood Exchange and grafting workshop in the exhibition hall of MOFGA's Common Ground Education Center in Unity. MOFGA also offers a full range of organic orcharding classes; see mofga.org for details.

Pears *Pyrus communis* are native to temperate Europe and Asia and can grow up to 100' tall in the wild. Many pear varieties are hardy in New England but tend to take longer to come into bearing than apples. Farther south, pears tend to bear annually. However, in Maine, where they are approaching their northern limit, some varieties tend to bear biennially. Pick fruit when green and ripen it on the shelf. Or, for optimal eating, try Ed Fackler's method: "…when fruits exhibit slight color changes, begin to test pressure (using your thumb) near the stem. When there is a slight 'give,' pick all the fruit, store at or near 35° for 7 or more days. Then remove them as needed, allow them to sit at room temps for 2–4 days which allows them to ripen to peak flavor."



Pear blossoms are less attractive to bees than apple blossoms, so pears should be planted closer together to ensure pollination. Although some pears appear to be self-pollinating, **we recommend a second variety for pollination**. Bloom dates for all varieties are similar.

Pears are on OHxF97 rootstock and will reach approximately 25' at maturity; plant 15–20' apart. (2½-6' trees)

Bartlett Late Summer. Seedling found in Aldermaston, England. Introduced to the U.S. in the late 1700s. Also known as **Williams' Bon Chrétien**. The most widely planted and well known of all pears, accounting for 75% of the U.S. commercial crop. Adaptable to many climates and soils. Large greenish-yellow classic oblong obtuse-pyriform fruit; very good quality. Full reliable annual crops. Large vigorous easy-to-grow long-lived tree bears young. I used to think you couldn't grow Bartlett in central Maine, but I've changed my mind. Now I recommend it as a good choice south of Bangor. Susceptible to fireblight. Good pollinator for Asian Pears. **Will not pollinate Seckel.** Z4. **ME Grown.**

244A Bartlett, $31.25

Beurre Clairgeau Mid-Late Fall. Pierre Clairgeau intro, Nantes, France, about 1830. Large Bartlett-shaped yellow fruit with a beautiful red blush sprinkled with russet. At its best, the fruit is richly flavored, melting, buttery, juicy, sweet and aromatic. Brought to the U.S. around 1854, Clairgeau found its niche for canning and other cooking. The trees are beautiful, almost ornamental, vigorous, unusually upright, healthy, very productive, bearing young and annually. Quickly spread throughout New York and New England up into Maine, becoming a mainstay of American pear growing at that time. Now mostly forgotten—we're pleased to be bringing it back. Z4. **ME Grown.**

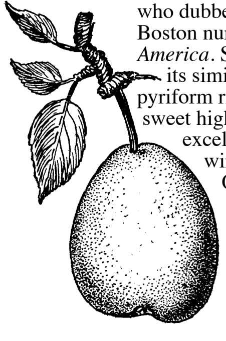
245A Beurre Clairgeau, $31.25

Bosc Fall. Seedling introduced by Van Mons, Lourain, Belgium, 1807. Also called **Beurre Bosc**. Oblong acute-pyriform, or large and long-necked; dark rich yellow covered with cinnamon-brown russet. Distinctive sweet rich spicy buttery flavor. Melting juicy tender white flesh has smooth texture and a pleasing aroma. Somewhat gritty around the core. Large vigorous upright spreading tree bears huge crops annually. Good pollinator for other varieties. A longtime favorite throughout central Maine. Z4.

246A Bosc, $31.25

Cabot Vermont Fall. An old dessert pear discovered in Cabot, VT, a few miles west of the New Hampshire border and about as far north as Bangor, ME. Introduced to us many years ago by Armando Bona of Passumpsic, VT. Not to be confused with the old Massachusetts pear Cabot. A superior dessert pear with medium-large oblong obovate-pyriform fruit. Yellowish skin has a slight reddish blush. Yellowish sweet flesh is coarse grained, extremely juicy, with no grit cells. Not only is it a delicious dessert fruit, it is also remarkable for its very rare "double" flowers. Highly ornamental! Annual and self-pollinating. Very hardy. Z4 or possibly even Z3. **ME Grown.**

249A Cabot Vermont, $31.25



Dana Hovey Winter. Thought to be a seedling of Seckel. Roxbury, MA, about 1854. Introduced by 19th-c. fruit enthusiast Francis Dana who dubbed it "Dana's Hovey" in honor of CM Hovey, Boston nurseryman and author of *The Fruits of America*. Sometimes called **Winter Seckel** because of its similarity to Seckel. Small obovate-obtuse-pyriform rich golden-yellow russeted fruit. Intensely sweet highly aromatic tender storage pear has excellent flavor; possibly the best eating of all winter pears. Keeps extremely well. Harvest in October and store in a cool dry spot. Still great eating in December—sometimes even as late as February. Hardy vigorous moderately productive spreading tree adapts to a variety of soils. No scab and relatively few bugs. Z4. **ME Grown.**

250A Dana Hovey, $31.25

Glou Morceau Winter. M. Hardenpont intro, Mons, Belgium, about 1750. Also known as Glout Morceau and 22 other synonyms. Large obovate-obtuse-pyriform pale greenish-yellow russeted fruit ripens in November and December. According to *The Pears of New York*, the flesh is "tinged with yellow, fine-grained except near the core and under the skin, tender, buttery, sweet, with a rich pleasant, aromatic flavor, astringent near the skin; quality good to very good." Arrived in Maine by the 1840s. *Glou* means 'delicious' or 'dainty' in the Walloon language. *Morceau* is French for 'morsel.' That makes the pear a "delicious morsel" or a "dainty bit." As far as pronunciation, *Elliott's Fruit Book* in 1854 advises that "those who grow it must speak the name as best they may." Productive trees are only medium-sized and not very vigorous. Probably Z4 or 5. **ME Grown.**

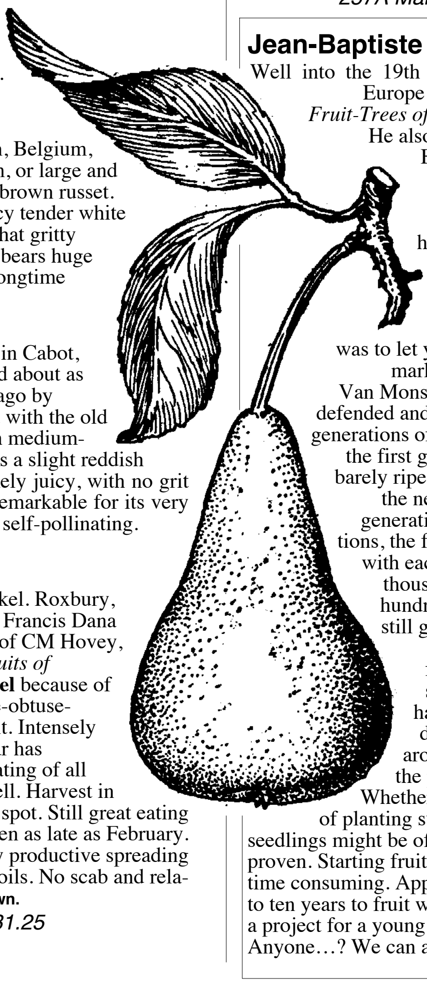
254A Glou Morceau, $31.25

Gourmet Late Summer. SD F15 x Ewart. SD State U, 1988. If you like the idea of Asian pears but have been scared off by lack of flavor and hardiness, try Gourmet. Although similar in texture to Asian pears, Gourmet's sweet yellow flesh has more flavor and less wateriness. It's a crisp pear that melts in your mouth. I've yet to become thrilled with many Asian pears I've tried, but I continue to be a big fan of Gourmet. Greenish-yellow thick tender skin with russet dots on 2" obovate-obtuse-pyriform fruit. A very nice unusual addition to the mix of summer fruits. Produces a good crop in our orchard annually. Very hardy medium-sized upright tree. Sterile pollen; will not pollinate other trees. Z3. **ME Grown.**

255A Gourmet, $31.25

Marie Louise Late Summer-Early Fall. Abbe Duquesne intro, Mons, Belgium, about 1800. Named for Napoleon's second wife. One of the best of all dessert pears. Medium-sized Bosc-shaped fruit is a rich yellow with russet netting and sometimes a reddish blush. *The Pears of New York* calls it "finest flavored of their season…among the perfections of Nature… Marie Louise is one of the choicest sorts for a home collection or in the hands of a pear fancier." Flesh is "tender and melting, very juicy, and the flavor is a most delectable commingling of refreshing piquancy and scented sweetness." Elliott (1854) describes the tree as "rather straggling, or diverging and drooping… requires rich, warm, sandy soil." Not the most productive and somewhat susceptible to cracking and scab. Brought to U.S. in 1823 and then widely disseminated including up into Maine. Z4. **ME Grown.**

257A Marie Louise, $31.25

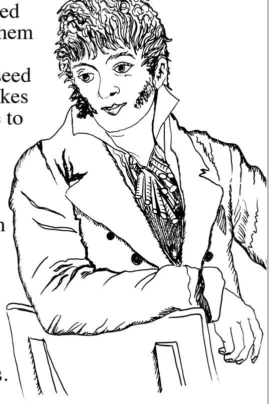


Jean-Baptiste Van Mons: Putting the butter in Bosc

Well into the 19th century, pears were at least as popular as apples in Europe and America. In his definitive 1848 work *The Fruit and Fruit-Trees of America*, AJ Downing lists nearly 2000 apple varieties. He also lists a remarkable 1000 pears. Where are they all now?

By Downing's time, most of the apple varieties grown in the States originated on this side of the Atlantic. Not so with pears. More than half the pears Downing listed originated in France and Belgium. Of those, nearly a hundred were developed and introduced by Jean-Baptiste Van Mons (1765-1842), a professor of chemistry and agronomy in Louvain, Belgium. Even today most Americans know Bosc and Anjou, or Beurre Bosc and Beurre d'Anjou as Van Mons called them. The *beurre* was to let you know how buttery the flesh was certain to be. Call it marketing. Every year we offer Bosc **(246A)** in our catalog.

Van Mons' unique breeding system was widely studied, emulated, defended and sometimes attacked. The premise was to grow multiple generations of pears from wild seed as rapidly as possible. As soon as the first generation bore fruit, Van Mons would harvest unripe, or barely ripe, pears, let them rot with the seeds still inside, then plant the new seed before it dried out. He repeated this for multiple generations and evaluated the results. According to his observations, the fruit quality and precocity improved with each generation. He grew tens of thousands of seedlings and named hundreds of varieties, many of them still grown today.

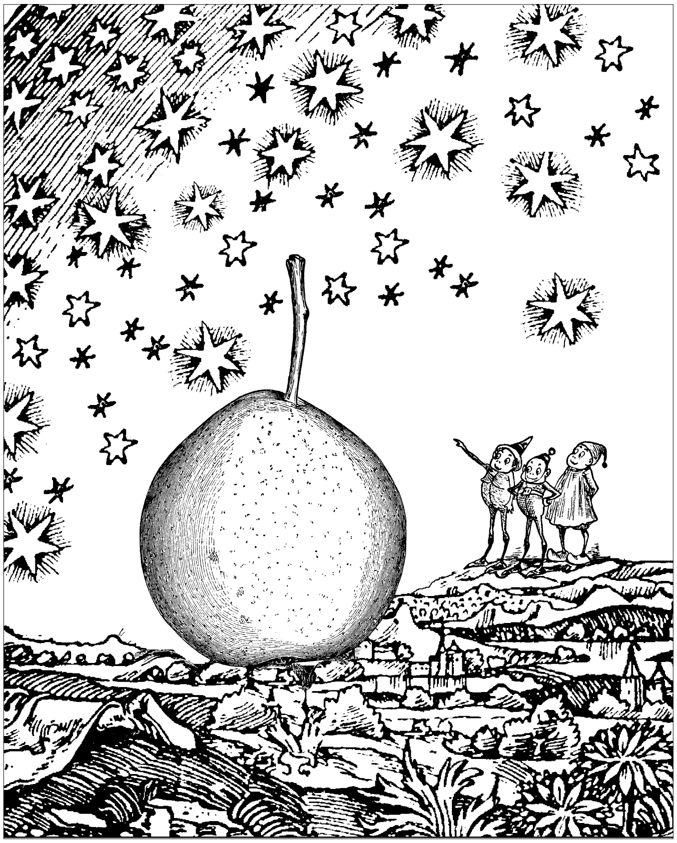


His method of extracting seed from rotten unripe fruit makes sense. The porcupines love to harvest our unripe pears and deposit the fertilized seed around the orchard. We have the pear seedlings to prove it.

Whether or not the quick repetition of planting successive generations of seedlings might be of value has never been proven. Starting fruit from seed is incredibly time consuming. Apples and pears can take up to ten years to fruit when grown from seed. It's a project for a young Fedco customer. Anyone…? We can always use a few new pears.

McLaughlin Fall. Probably Oxford County, ME, before 1800. Excellent highest-quality dessert pear keeps well into winter. Medium-large obtuse-pyriform yellow russeted fruit, sometimes with a reddish blush. Sweet, rich, perfumed, extremely juicy and melting. Introduced to me by Steve Barr whose family's tree was planted about 120 years ago. "Don't despair this pear comes off the tree like a green rock in October. We shake them down after Columbus Day when the nights are getting cold. We bring them inside and place them in canvas bags, and start searching in a week or two. The taste is sweet with a hint of cinnamon, and the texture delightful, not mealy. A juicy pear you have to eat over a napkin or cut it up and eat out of a bowl…yields heavily year after year. This pear is easy to grow, we do nothing to it at all except pick them in October." Z4. **ME Grown.**

258A McLaughlin, $31.25



Nova Late Summer. Hammond, NY. Discovered and introduced by Bill MacKentley of St Lawrence Nurseries, Potsdam, NY. Large yellow roundish dessert pear with melting juicy flesh. Chris Blanchard's favorite pear. For decades he and Liz Lauer have been trialing a wide assortment of pears a few hours north of here in Penobscot County. He described it to me as "large with smooth creamy texture and a thin skin. Wonderful dessert pear. Also the best canning of our 12–14 varieties." Holds its shape in the jar. Very hardy, though from our trials in northern Aroostook County, not quite as hardy as Patten. Appears to be fireblight and scab free. Z3. **ME Grown.**

260A Nova, $31.25

Patten Late Summer. Orel 15 x Anjou. CG Patten intro, Iowa St U, 1922. The best-quality large hardy pear available. Very good fresh eating with sweet "high flavor." Fine-grained soft flesh has minimal grit cells. Vaguely reminiscent of Bosc in size and shape. Good canning pear. Tree is extremely adaptable, growing all over the Northeast. Long willowy very flexible branches won't break even under the weight of its heavy crops. Fared incredibly well during the cold "test winter" several years ago when hundreds of northern Maine pear trees died to the roots. Extremely hardy and highly recommended for coldest districts. A good pollinator for other varieties. Scab resistant. Z3. **ME Grown.**

261A Patten, $31.25

Pear Leaf Blister Mite

Pear leaf blister mites can sometimes be a problem for pear growers in the U.S. The tiny mites overwinter under the budscales and become active in spring. They are too small to see with the naked eye, but you'll know you have them if pear foliage looks like it has red blisters that eventually turn black. We recommend a dormant oil or pure neem oil spray in spring just before the pears leaf out. You can also do a sulfur spray in the fall. (Apply appropriately, with protection. Read labels.) As a precaution, we spray Fedco pear trees with pure neem oil in the spring before shipping. Neem oil spray is organically certifiable and poses no risk to you, your pets or the environment. We have noticed that as young trees mature they often outgrow the infection.

Rogue Red (5-235) Late Fall/Winter. [Comice x (Seckel x Farmingdale seedling #122)] Frank Reimer intro, Southern OR Exp Stn, Medford, OR, 1969. Very sweet high-quality late-ripening dessert pear with buttery cream-colored flesh and very few grit cells. Large Seckel-shaped (obovate), mostly red blushed and partially russeted. Harvest about the time of Bosc. Said to be a very good winter keeper. Sometimes mistakenly called Rouge Red, an understandable slip-up considering its red skin. Vigorous upright annual-bearing moderately productive tree. Shows tolerance to fireblight; resistant to pear scab. Z3/4. **ME Grown.**

262A Rogue Red, $31.25

Seckel Late Summer. Seedling near Philadelphia, PA, early 1800s. Sometimes called **Sugar Pear**. Often considered the best-flavored of all pears; even the skin is delicious. Small obovate fruit is russeted yellowish-brown with slight red blush. Juicy, spicy, distinctive and aromatic. Eat ripe off the tree, or pick firm and ripen later. We use Seckels to make our baked pear sauce. It's wonderful. Very productive annual-bearing large tree, easy to grow. *The* most reliably bearing pear tree we have in our home orchard. Scab and fireblight resistant. **Will not pollinate Bartlett.** Z4. **ME Grown.**

263A Seckel, $31.25

Stacyville Late Summer. Unknown origin. Stacyville, ME. Medium-sized obovate-obtuse-pyriform pears are light yellow with an orange to greyish-red blush. The sweet fruit has a delicious citrusy aftertaste. Although the fruit is good fresh eating, we prefer to cook it. Precocious and productive. Our tree gives us large crops most years. Long ago, friends told me about the pear and insisted that I make the trip to Stacyville in southern Aroostook County. When I finally saw it myself, I thought that the 50' vase-shaped tree was an elm. That tree, held together with cables, was extremely old but still bearing huge crops. Appears to be self-pollinating. Disease resistant, extremely hardy and very vigorous. They don't keep for long; use them up quickly! Rare. Z3. **ME Grown.**

264A Stacyville, $31.25

Summercrisp Midsummer. MN N33201 (Gaspard No. 5). Brought to the MN Hort Res Stn by John Gaspard in 1933, likely discovered as a wild seedling. U Minn, 1986. Large obovate acute-pyriform very sweet dessert and canning pear with green skin and a red blush. Ripens in August in Maine. Eat them fresh crisp, can them in quarters, and juice the rest. Precocious annually bearing tree, medium-sized with typically conic habit. Considered the hardiest variety in the Minnesota collection. Free from fireblight. Z3. **ME Grown.**

265A Summercrisp, $31.25

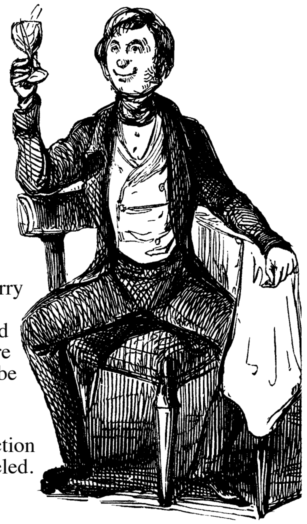
Urbaniste Fall. Religious order of Urbanistes, Mechlin (Mechelen), Belgium, before 1780. High-quality dessert pear. *The Pears of New York* loves the "highly-flavored fruits—so sweet, rich, perfumed and luscious… flesh is tender, sweet, juicy, and as delicately perfumed as that of Seckel… with a distinct flavor and scent which gives the fruit the added charm of individuality." Medium-sized yellow faintly blushed and russeted fruit is obovate-obtuse-pyriform, a pudgy version of a Bartlett. Tree is beautiful, graceful and productive but takes longer to come into bearing than other varieties. Arrived in U.S. in 1823, called "new and superior" in 1833, and recommended for Maine in 1859. Probably Z5. **ME Grown.**

269A Urbaniste, $31.25

Perry pear trees

Perry is fermented pear juice—the pear equivalent of hard cider. While you can ferment any pear juice, the best perry is made from small dry astringent varieties selected over the centuries just for that purpose. Most of these perry pears are not suitable for dessert or cooking. Traditionally, real perry could be made only within sight of May Hill on the border of Gloucestershire and Herefordshire in western England, which we visited in 2011. The trees were very tall and really old, and the perry was delicious. That edict has relaxed a bit and some version of perry is now being made most everywhere pears can be grown. The Orne region of Normandy is famous for its *poire*. We were there in 2014 and those trees looked about as old as the ones within sight of May Hill. At Franklin County CiderDays in western Mass you should be able to sample some very tasty perry at the amateur tastings.

We're offering this collection of 3 trees to get your perry orchard started. Although we're not listing individual perry trees this year, you'll find a handful of traditional varieties offered as scionwood for grafting (see page 38.) These trees are a good investment—they should live to be about 300 years old.



Perry Pear Collection **A bundle of 3** trees to begin your perry orchard. Collection will include 3 different varieties, all labeled.

278A Perry Pear Collection, bundle of 3, $85.00

Asian Pears *Pyrus pyrifolia* have been grown in China, where there are thousands of named cultivars, for more than 2000 years. They are long-lived and bear young. Asian pears differ from European pears: they are crisp and very juicy, sweet and mild with a nutty background, and are roundish in shape. **Although partly self-fruitful, pollinators are recommended.** The varieties we offer will pollinate one another. Some European pears, notably Bartlett (**244A**), will also act as pollinators. Because they set heavily, thin the crop once or even twice during the first two months after bloom to ensure large fruit. Unlike European pears, they should be tree-ripened. When the seeds are black, the pears are ready. They ripen in late summer and keep several weeks with refrigeration. Cultural requirements are similar to European pears. Although they are usually considered a Zone 5 plant, many of us in Zone 4 are having bountiful crops. (2½-6' trees)

Hosui Late Summer. [Ri-14 (Kikusui x Yakumo) x Yakumo] Nat'l Hort Res Stn, Tsukuba, Japan, 1972. Large round-oblate long-stemmed fruit with medium-thick skin covered with glowing yellow-orange-golden brown russet and numerous light-russet dots. Firm crisp fine-textured juicy mild subacid yet sweet rich-flavored white to off-white flesh is considered by some to be the best-flavored of all Asian pears. Standard commercial variety. Will store for a month. *Hosui* means 'much water.' Medium-sized very vigorous productive tree. Susceptible to fireblight. Z5.

279A Hosui, $31.25

Nijisseiki Late Summer-Fall. Chance seedling "found on a rubbish heap" by Kakunosuke Matsudo at Ishii, Chiba Prefecture, Japan, 1898. Also known as Twentieth Century. White flesh is mild-flavored, crisp, juicy, medium-sugar and high acid. Medium-large greenish-yellow semi-glossy fruit is roundish-oblate. This is the pear that, along with Chojuro, kicked off the Asian pear industry in Japan and became the standard to which all others are compared. Tree is medium-sized, upright and spreading. Fruit can be small if you don't thin—leave about one fruit per spur. Stores up to 6 months in cool storage. Used extensively in modern Japanese pear breeding programs. Ripens a couple of weeks later than Shinsui. Z5/6. **ME Grown.**

280A Nijisseiki, $31.25

Shinko Fall. Nijisseiki seedling, Japan, 1941. *Shinko* means 'new success' in Japanese. Medium-large lumpy round brownish russeted fruit. Yellowish flesh is sweet, crisp and juicy, with very good flavor. Ripens late and stores up to 3 months. Moderately vigorous precocious annually bearing tree. In addition to the other Asian pears, Bartlett is also a good pollinator for Shinko. Fireblight resistant. Z5.

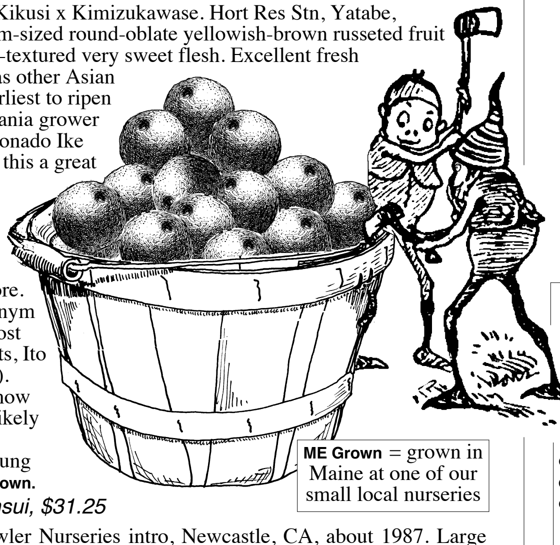
281A Shinko, $31.25

Shinseiki Late Summer. Nijisseiki x Chojuro. Teiji Ishikawa intro, Okayama Prefecture Ag Exp Stn, Japan, 1945. Medium-sized round-oblate light to medium-bright yellow fruit, with little to no russeting. Flesh is white, crisp, sweet and mildly tart with lots of juice. In English *Shinseiki* means 'new century.' Keeps about 3 months in storage. Dense spreading precocious productive tree. Cold hardy. Disease resistant. Z5. **ME Grown.**

282A Shinseiki, $31.25

Shinsui Summer. Kikusi x Kimizukawase. Hort Res Stn, Yatabe, Japan, 1967. Medium-sized round-oblate yellowish-brown russeted fruit with crisp juicy fine-textured very sweet flesh. Excellent fresh eating. Not as firm as other Asian pears. One of the earliest to ripen each year. Pennsylvania grower and Asian pear aficionado Ike Kirschner considers this a great pear. Keeps about 6 weeks in refrigeration. *Shinsui* is translated as 'new water,' 'adoration,' 'inundation' and more. It is also the pseudonym of one of Japan's most famous 20th-c. artists, Ito Shinsui (1888-1972). Even if you don't know his name, you will likely recognize his iconic colorful prints of young women. Z5/6. **ME Grown.**

283A Shinsui, $31.25

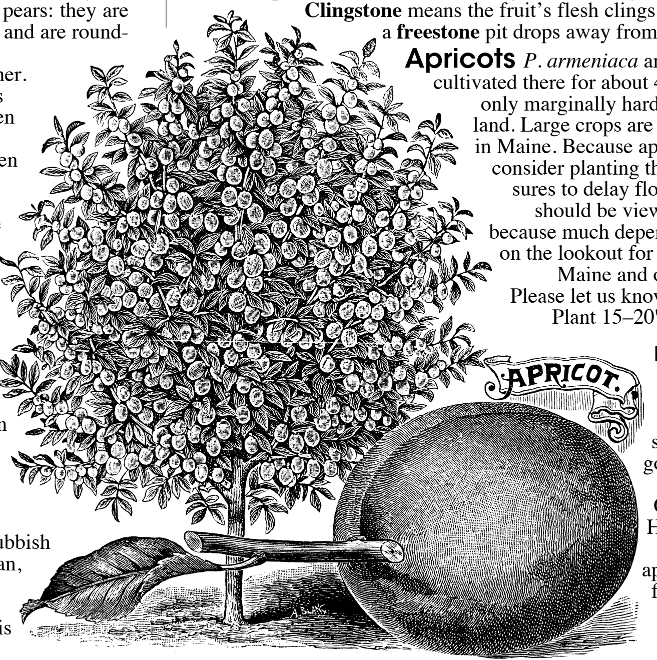


ME Grown = grown in Maine at one of our small local nurseries

Yoinashi Fall. Fowler Nurseries intro, Newcastle, CA, about 1987. Large conic light brown russeted fruit. Fine-textured off-white flesh is crisp, juicy, aromatic and sweet. Means 'good pear' in Japanese. It is a good variety! When I talked to one of the folks at Fowler Nurseries, she described it as having "a little bit of a zip" to it. Harvest after Hosui and before Shinko. Upright medium-vigorous tree. Good pollinators include other Asian pears and Seckel (**263A**). Moderate tolerance to fireblight. Z5. **ME Grown.**

284A Yoinashi, $31.25

Stone Fruits *Prunus* spp. are widely cultivated around the world and adaptable to most of New England. Not highly particular as to soils. **Clingstone** means the fruit's flesh clings to the pit (or stone) and a **freestone** pit drops away from the flesh.



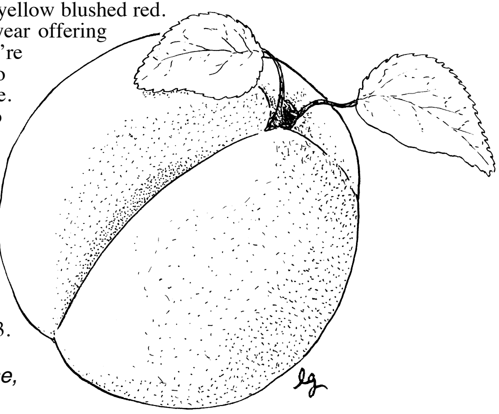
Apricots *P. armeniaca* are native to central Asia, cultivated there for about 4000 years. Apricots are only marginally hardy in northern New England. Large crops are possible but uncommon in Maine. Because apricots bloom very early, consider planting them with northern exposures to delay flowering. The zone rating should be viewed as an approximation because much depends on your site. We are on the lookout for reports of hardy trees in Maine and other northern locations. Please let us know if you've had success. Plant 15–20' apart. **Self-pollinating**.

Brookcot Summer. BF #7-3. *P. mandschurica* seedling. Strathmore, Alberta, 1980. Small semi-freestone fruit with good flavor though not as firm as Westcot. Consistently productive. Highly recommended for coldest districts where apricots have consistently failed. Blooms later than both Debbie's Gold and Westcot. This may be a plus, as one of all apricots' fatal flaws is early blooming. Extremely hardy. Has survived –48°. Upright tree form. Probably Z3. (3-6')

287A Brookcot, $31.50

Montrose Summer. Introduced by Dr. Lloyd Rosenveld, Idaho, 1966. Parent tree discovered at 6000' elevation near Montrose, CO, 1951. Abundantly yields sweet juicy semi-freestone medium-large fruit up to 2" diameter. Skin is yellow blushed red. This is our first year offering Montrose, and we're looking forward to trialing it in Maine. Trials in Colorado and Idaho have showed hardiness to –31°. Our stock is one-year-old trees, which may be smaller than other varieties. Considered very hardy, possibly Z3. (2-5')

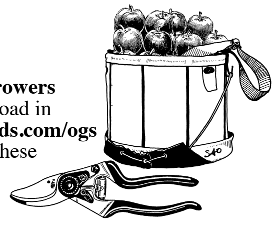
288A Montrose, $31.50



Westcot Summer. Scout x McClure. Introduced by Les Kerr, Ag Canada, Morden, Manitoba, 1982. Small roundish freestone fruit, yellow-orange with a red blush. Smooth juicy flesh with a mild sweet flavor. Firmer than Brookcot. Vigorous upright spreading productive tree. Blooms a day earlier and fruits before Debbie's Gold. Probably hardiest of the apricots we're offering this year. Pits also the largest! Z3. (3-6')

289A Westcot, $31.50

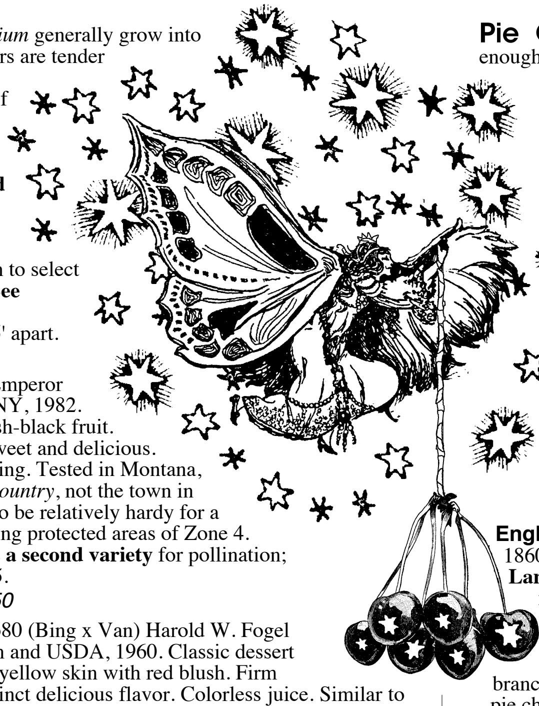
Top-Quality Orchard
and Horticultural Supplies
Available Year-round!



Come pick up supplies at our **Organic Growers Supply** warehouse on the Bellsqueeze Road in Clinton, ME, or order online at **fedcoseeds.com/ogs** or through our paper Seed catalog to have these orchard essentials shipped to you. We've expanded our selection to cover your orcharding needs.

Both Organic Growers Supply and Fedco Seeds warehouses are now open Tuesday, Wednesday and Thursday from 9 to 3 year-round. (Holidays and rare exceptions noted on our website.)

Sweet Cherries *P. avium* generally grow into large trees although the flowers are tender and fruiting can be iffy in Maine. We are testing some of the hardiest varieties and hope to have more available in upcoming years. **Most sweet cherries need a second variety for pollination.** Although most varieties will successfully pollinate other varieties, care should be taken to select pollen-compatible varieties. **See descriptions for pollination requirements.** Space trees 25' apart. (2$^{1}/_{2}$-6' trees)



Kristin Summer. NY1599 (Emperor Francis x Gil Peck) Geneva, NY, 1982. Large very dark red or purplish-black fruit. Firm juicy red flesh is rich, sweet and delicious. Good resistance to fruit cracking. Tested in Montana, New York and Norway (the *country*, not the town in western Maine). Considered to be relatively hardy for a sweet cherry, possibly including protected areas of Zone 4. Ripens in mid-July. **Requires a second variety** for pollination; compatible with Rainier. Z4/5.

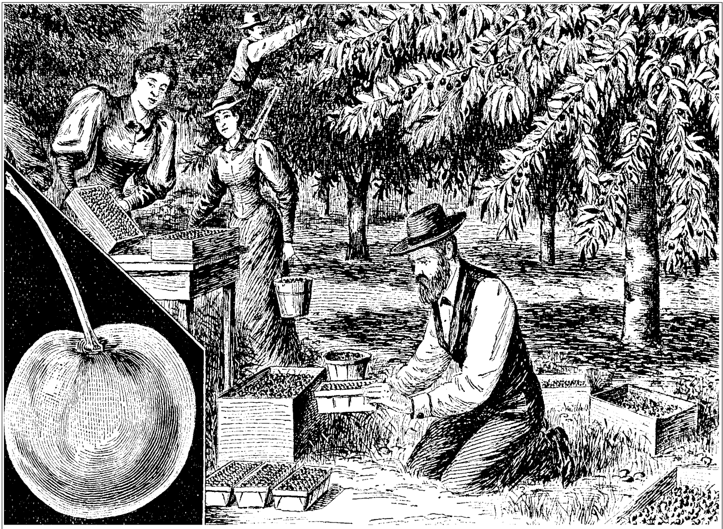
291A Kristin, $31.50

Rainier Summer. Wash.P1-680 (Bing x Van) Harold W. Fogel intro, Washington Ag Exp Stn and USDA, 1960. Classic dessert cherry. Very large fruit, light yellow skin with red blush. Firm fine-textured flesh with a distinct delicious flavor. Colorless juice. Similar to Bing. Good fresh or canned. Quite resistant to cracking. Ripens midsummer. Vigorous productive tree. Early to come into bearing. One of the hardiest sweet cherries. **Requires a second variety** for pollination; compatible with Kristin. Z5.

292A Rainier, $31.50

Stella Midsummer. 2C-27-19 (Lambert x John Innes Sdlg. 2420) Canadian Dept of Ag Res Stn, Summerland, BC, 1968. Hardy good-quality self-fertile sweet cherry. Large heart-shaped black-skinned fruit has juicy medium-firm black flesh. May be a disappointment to sweet cherry aficionados from the Northwest but could be a dream come true for orchardists in the North. The fruit buds are relatively tender, but we've received encouraging reports that the tree is doing well in Minnesota. Ours died to the ground a few years ago. Upright spreading vigorous productive tree will grow to 25–30'. **Self-pollinating**, but will pollinate other sweet cherries. Z5.

293A Stella, $31.50



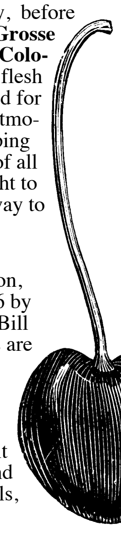
Relative ripening dates

Although our catalog focuses on woody plants that do well in the northeast, we have customers all over the U.S.—up along the Canadian border, in the mid-Atlantic states, down in the mountains of North Carolina and out west in the high desert—anywhere hardiness is important. We love having customers so spread out, and we do our best to tell you when a variety will ripen in your orchard. But it's not easy. A fruit that ripens in September in northern Maine might ripen a month earlier in Pennsylvania. Ripening dates also vary from year to year depending on conditions. Not only that, the fruit might be exquisite up north but rather blah farther south. That's the nature of these varieties, and it's part of why we offer so many each year. We think you'll find varieties that can thrive in your area.

Pie Cherries *P. cerasus*, also called sour cherries, are delicious enough to eat right off the tree. They fruit in early to midsummer and don't mind heavy soil. They are especially good in pies. They are generally divided into two groups: **Morello** types have dark red spherical fruit, dark juice and relatively small compact trees. **Montmorency** (or Amarelle) types have light red slightly flattened fruit, clear juice and medium-sized somewhat open trees.

Pie cherries are significantly hardier than sweet cherries but can be frustrating to grow. Although the trees are fully hardy in Zone 3, flower buds may be damaged in colder winters. Some growers in Maine have reported large harvests only to have their trees die unexpectedly a year or two later. We regularly hear reports of excellent crops, so we know it can be done. Our hope is to find pie cherries that will be consistently healthy and productive. We are very interested in your successes and failures. If you have had experiences you think might be useful to others, please be in touch. **Pie cherries are self-pollinating, and do not require another variety for pollination**. Plant 15–20' apart. (2$^{1}/_{2}$-6' trees)

For other fruits called "cherries," see *Cornus mas*, Cornelian Cherry, p. 41; *Prunus* x *kerrasis*, Carmine Jewel dwarf sour cherry, and *P. tomentosa*, Nanking Cherry, both on p. 46.



English Morello Summer. Netherlands or Germany, before 1860. Sometimes called **Grosse Cerise a Ratafia**, **Grosse Lang Lothkirsche**, **Griotte du Nord**, **Morris** and **Colorado Morello**. Very dark red-black skin. Dark red flesh and juice. Excellent culinary cherry, recommended for pies and all other cookery. Ripens late, after Montmorency. Distinctive small roundish tree with drooping branches. Brown-rot resistant. One of the most famous of all pie cherries. Despite the name we know it by, it is thought to have originated on the Continent, eventually finding its way to England and then North America. Z4/5.

298A English Morello, $31.50

Evans Mid-Late Summer. Unknown parentage. Edmonton, Alberta. Also called **Bali**. Rescued from obscurity in 1976 by Dr. Ieuan Evans for whom it was named. Popularized by Bill MacKentley of St. Lawrence Nurseries. Hardiness reports are inconsistent, but our own Aroostook County trials are proving it to be hardier than Meteor, Montmorency or North Star. Cropping and fruit-quality reports are also inconsistent. Some extremely positive and others not so. Large crops of Morello-type fruit are possible and the fruit is excellent for eating, jams, jellies, pies, dark red juice and wine. Naturally dwarf tree, tolerant of a wide range of soils, although prefers light fertile soils. Z3.

299A Evans, $31.50

Mesabi Summer. Bing x chance seedling. (Sweet x sour cherry) Duluth, MN, 1964. Red skin and lighter red flesh with clear juice. Considered to be a sour cherry, but sweeter than other types. Recommended for sauce and pies. Tree will grow to about 10–14'. We became very curious about Mesabi when we heard reports of 20-year-old trees in Maine remaining healthy and productive. About ten years ago we began a trial on our farm. Our tree has shown no dieback and is fruiting again this summer. It has also remained entirely disease free. Z4.

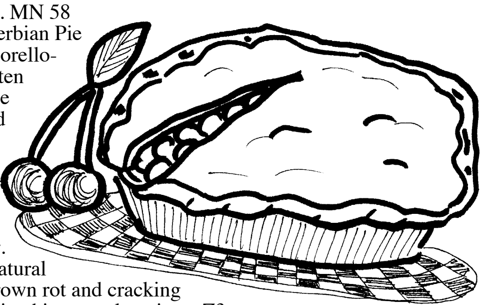
300A Mesabi, $31.50

Montmorency Summer. Seedling of Cerise Hâtive or Cerise Commune. Montmorency Valley, France, before 1600. Introduced to the U.S. about 1830. The most famous of all pie cherries. Not widely grown in Europe or Russia but long the standard of excellence in the U.S. Firm-fleshed bright red fruit makes a clear light pink juice. Surprisingly hardy, though not as hardy as Garfield Plantation or Evans. Our Aroostook County test orchard trees fare better than Meteor, but just barely. Should do really well from central Maine south. Appears to be resistant to brown rot. Vigorous productive medium-sized upright-spreading tree tolerates a variety of soils. Z3/4.

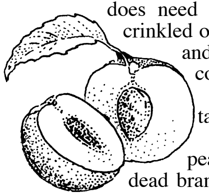
301A Montmorency, $31.50

North Star Summer. MN 58 (English Morello x Serbian Pie #1) U Minn, 1950. Morello-type cherry can be eaten fresh when ripe. Large roundish heart-shaped fruit with a small stone. Dark glistening mahogany-red skin. Dark red meaty tender juicy flesh has pleasantly acid flavor. Very productive. A natural dwarf. Resistant to brown rot and cracking but may not be long-lived in some locations. Z3.

302A North Star, $31.50



Peaches *P. persica* Northern New England peach trees can do very well. They bear young and so heavily that they may break branches if unthinned or unsupported. Trees may also die unexpectedly at any age. Up here peach trees can take big hits some winters. In recent years some of the trees out in the open at our place died to the ground. The survivors got pretty beat up. However, the young espaliered peach trees planted against the south side of our house look great, and 2017 has been a great year for many trees in central Maine!



Peaches are usually unaffected by pests or diseases in northern areas, the occasional exception being **peach leaf curl**. PLC is not a fatal problem but does need to be controlled if you get hit with it. Look for crinkled or puckered foliage in spring. Remove affected leaves and compost them. Spray the tree with lime sulfur or copper early the following spring while it is still dormant (before any buds open!) Onion, garlic or horsetail spray while leafed-out may also be effective.

Peaches fruit on last year's growth! Prune your peach trees in May, once they leaf out. Trim off any dead branches and leave most or all of the live wood. Never prune off all your new growth. If your tree becomes leggy, make a few bold cuts back to a vigorous branch closer to the trunk. That will promote even fruiting throughout your tree.

Peach trees are self-pollinating; they do not need a second tree for pollination. Plant 15–20' apart. (3-6' trees)

Contender Late. NCT 544 (Winblo x complex parentage of North Carolina selections) DJ Werner, JR Ballington and DF Ritchie intro, Ag Exp Stn, Raleigh, NC, 1988. A fairly new high-quality hardy variety worth trialing in the North. Large round bright red and yellow freestone fruit with a slightly raised suture. Firm melting aromatic yellow flesh. Growth habit similar to Red Haven, but fruit ripens 3 weeks later. Resistant to leaf spot. Because it blooms quite late, it might escape late spring frosts. Z4/5.

306A Contender, $30.25

Garnet Beauty Early. Sport of Red Haven. Ruthven, Ontario, 1958. A sport (mutation) of Red Haven discovered by Garnet Bruner in 1951 and introduced seven years later. Medium-to-large yellow-fleshed semi-clingstone fruit with excellent flavor. Causing some buzz in northern peach-growing districts. We have two trees on trial at our place. The earliest peach we offer; ripens 12 days before Red Haven with similar hardiness. Vigorous and productive tree. Good bud hardiness. Recommended for colder districts. Z4/5.

307A Garnet Beauty, $30.25

Polly Mid. Probably a cross of Bailey and *P. davidiana*. SA Beach and TJ Maney intro, U of Iowa, Glenwood, IA, 1934. Usually referred to as **Polly Peach**. Medium-sized high-quality white-fleshed freestone fruit. Whitish skin with a reddish blush. Reliable cropper. Resembles the famous Champion, long the standard for white-fleshed peaches. Blooms later in the season. Considered the hardiest white-fleshed peach. No one knows the origin of the name. We bet it was inspired by Bertolt Brecht's infamous Polly *Peach*um, wife of the even more infamous Macheath—Mack the Knife. Was *the* apple named after him? Z4/5.

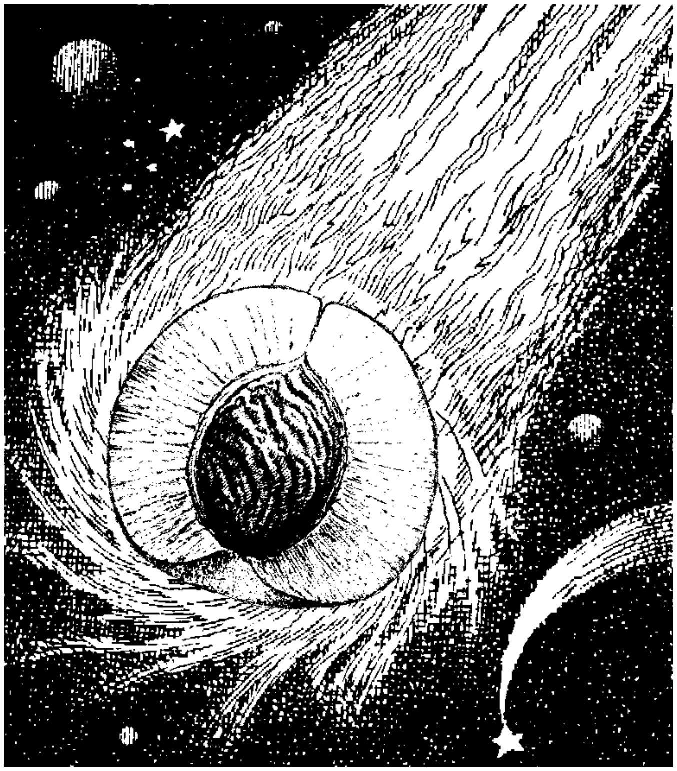
310A Polly Peach, $30.25

Red Haven Early-Mid. Halehaven x Kalhaven. MI Ag Exp Stn, 1940. Considered hardy, but not as hardy as Reliance. Medium-sized round fruit with beautiful red and golden-yellow skin and sweet firm fine-textured yellow flesh. Non-browning. Excellent for eating, freezing, canning, shipping. Probably the best-flavored peach we offer; also the world's most widely planted freestone peach. Hardy buds; vigorous highly productive disease-resistant spreading trees are tolerant to bacterial spot. Z5/6.

311A Red Haven, $30.25

Reliance Early-Mid. Open-pollinated seedling of Minn PHO 4559 x Meredith. NH Ag Exp Stn, 1964. Considered the hardiest peach. Medium-sized, roundish, freestone. Rather dull red blush over greenish yellow. Bright yellow flesh, soft and juicy. Flavor usually considered fair, but we love it in Maine. Often produces large crops. Bears at an early age. May have some resistance to peach leaf curl. Z4/5.

312A Reliance, $30.25



Plant preservation for the future

Throughout the world there are seed banks, scion banks, arboreta and plant collections, public and private institutions attempting to preserve our plant heritage. The Svalbard Global Seed Vault, on a remote island between Norway and the North Pole, keeps seeds of the world's food crops in deep freeze. The USDA Agricultural Research Service (ARS) has multiple sites around the U.S. that generally specialize in one or more crops per location, some offering scions for grafting at no charge to researchers, breeders and collectors. Among nonprofit organizations, Seed Savers Exchange in Decorah, IA, is one of the most famous. Although not specifically focusing on food-producing plants, the Arnold Arboretum and Mount Auburn Cemetery, both in the Boston area, are world-class plant conservation sites. You could spend a lifetime in either. You'll find one of the best apple collections in New England at Tower Hill Botanic Garden in Boylston, MA.

Here in Maine, we have MOFGA's Maine Heritage Orchard, currently home to nearly 300 apple varieties historically grown in the state. Among private collections, one of the best in the world is Nick Botner's in Yoncalla, OR, which includes thousands of apples, pears, grapes and more. Commercial orchards around the country have also done their part. Many orchards have rare varieties tucked away here and there. When I visit an orchard I always ask about their unusual varieties, those odd-balls you'd never find at the farm stand. You have to ask!

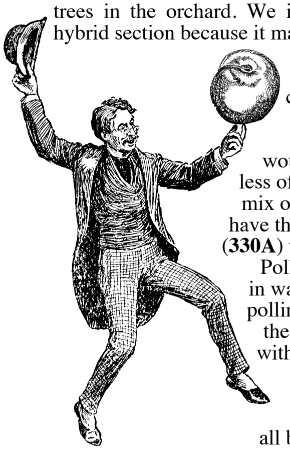
With all these collections out there, should we be concerned about the future of our diverse plant heritage? We should be. Private collections often get abandoned or cut down when owners get old or pass away. Rare and sometimes unique plant material is lost. Public institutions, including the ARS, struggle to get the funding necessary to keep plants alive. Become a member of your local arboretum or plant society; join Seed Savers or MOFGA. Make a donation. Become a Maine Heritage Orchard Tree Steward (see p. 14) and grow a rare variety in your yard. Write a letter to your representatives encouraging them to support the USDA ARS. Go buy apples at your local orchard. Plant seeds. Learn to graft. Help to pass the baton to future generations in any way you can.

Hybrid Plums

Prunus spp., extremely hardy crosses between various Asian and American species, may fruit even after severe winters.

Hybrid plums require a second variety for pollination. Hybrid plum pollination has been glossed over—or avoided—in virtually all catalogs and fruit-growing literature for generations. Here's what we recommend:

Plant a cluster of trees close enough together (3–6') for the branches to mingle. Our clusters number from 3 to nearly a dozen trees. Include native plum pollinators (*Prunus americana* seedlings or varieties) among the hybrids. With some decent sunshine during bloom, you should get good fruit set. We suggest Toka (**327A**) and South Dakota (**326A**) as good pollinators in additon to *P. americana* (**316A** or **231A**) or *P. nigra* seedlings or grafted trees in the orchard. We include the American plum seedling in this hybrid section because it may be the best pollinator for the hybrids.



Bloom times are similar for the varieties we offer; however, some growers have been concerned that the American plums, including South Dakota, bloom later than the hybrids. Some years, this can be an issue. Ideally you would plant at least 4 different varieties. Regardless of which ones you plant, you should get a good mix of pollen when each variety is in bloom. If you have the space, consider our Hybrid Plum Collection (**330A**) to cover all the bases of pollination.

Pollination may also improve with heat. Growers in warmer districts often report better success with pollination. This may be because the heat prolongs the bloom season, increasing the number of trees with simultaneous available pollen.

A long cold spring may also help with pollination. Spring 2015 was just that: long and cold. When the plums finally bloomed, they all bloomed at once.

Not susceptible to black knot. (3-6' trees)

American Plum Seedling *P. americana* 15-20' Not a hybrid, but included here since it may be the best pollinator for hybrid plums. Seedling plum that grows in thickets and produces very decent red, yellow and orange 1" fruit, suitable for fresh eating, canning and freezing. Spectacular white bloom in spring. Red fall color. Plant singly as a graceful specimen or plant 3–6' apart and let the branches intertwine for maximum pollination. Tends to sucker freely. Plant one of these for every 3 or 4 plum trees, within 10' of each of them. This tree stock is significantly larger than #**231A**, plum seedling rootstock. Extremely hardy. Z3. **ME Grown.**

316A American Plum Seedling, $21.00

Black Ice Midsummer. *P.* Lydecker [*P. besseyi* x (*P. salicina* Oka x *P. sal.* Z's Blue Giant)] U of Wisc, River Falls, 2006. Large 2" round early-ripening high-quality hardy blue-black dessert plum. Very sweet juicy reddish-purple semi-freestone flesh. Precocious and productive tree with a naturally compact growth habit. Bred by Brian Smith, whom I visited a few years ago on a fruit exploration trip in the Upper Midwest. He graciously showed us all through his amazing nursery in River Falls. He was growing many of his plums in huge tubs, manipulating bloom time using greenhouses and coolers. This enabled him to cross species or varieties that would never normally flower together. Though we're not fans of plant patenting, we are pleased to offer his first major introduction. The literature recommends Toka or La Crescent as a pollinator. Now in trials at our farm. **PVP**. Z3.

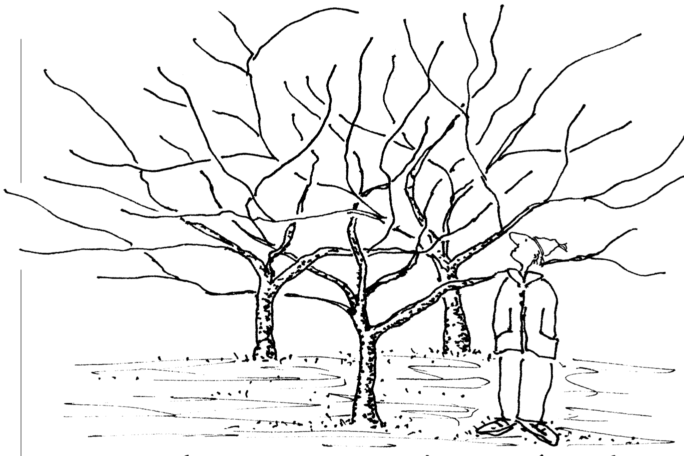
317A Black Ice, $31.25

La Crescent Late Summer. (*P. sal.* Shiro x *P. a.* Howard Yellow) U Minn, 1923. Also known as **Golden La Crescent** or **Golden Minnesota**. Most of the hybrid plum varieties are colored with some variation of red and orange with a little purple tossed in. Yellow-skinned La Crescent is one notable exception. The beautiful roundish tender thin-skinned yellow fruit is sometimes blushed with a little pink. Tender yellow juicy flesh of excellent quality is sweet, aromatic and suggestive of apricots. Freestone. Upright spreading vigorous tree. Z3/4. **ME Grown.**

321A La Crescent, $31.25

Pamela Late Summer. *P. a.* seedling, Westmanland, ME. High-quality sweet-fleshed totally freestone medium-small fruit. Reddish skin with yellowish undertones. Productive and extremely hardy. Flowers with a pinkish tone. An excellent pollinator for other hybrid and American plums. Many years ago the longtime Fedco growers Steve and Barb Miller purchased a hybrid plum from one of our competitors. The grafted plum never did well but the rootstock sprouted from below the graft and eventually fruited. It was so good, they began to graft it around the farm. When Steve first told me about the plum, he just called it Pam (from *P. americana*). We decided to dignify it a bit. Z3. **ME Grown.**

322A Pamela, $31.25



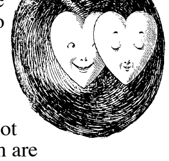
THE INTERTWINING HYBRID PLUM JUMBLE MEANS MORE FRUIT IN SEPTEMBER

Pembina Midsummer. (*P. sal.* Red June x *P. n.* Assiniboine) NE Hansen intro, SD Exp Stn, 1923. Large pointy bright red fruit with bluish bloom. Dark golden-orange flesh is firm and apricot flavored. One of the first of the hybrids to ripen every summer, about the same time or a bit earlier than Underwood and well before the bulk of the plum crop. Z3/4.

323A Pembina, $31.25

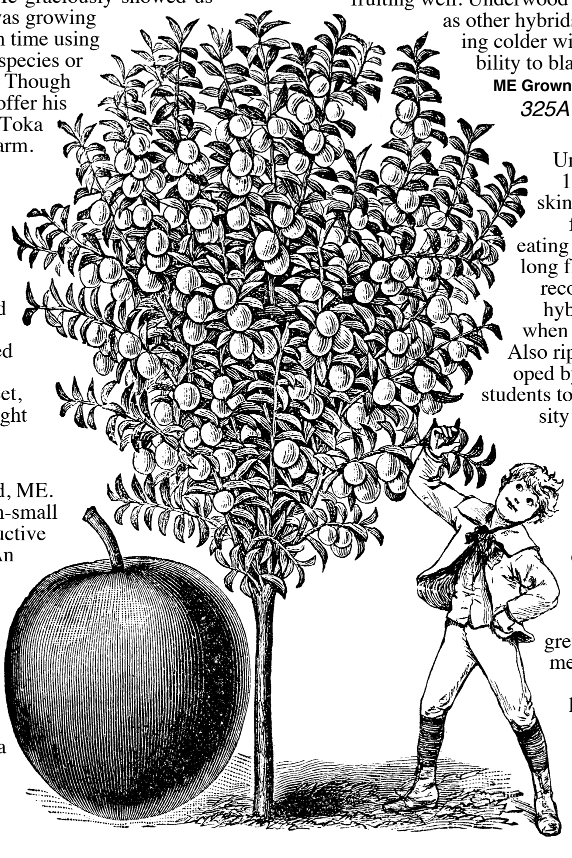
Pipestone Late Summer. MN 218 [*P. sal.* Burbank x (*P. sal.* x *P. a.* Wolf)] U Minn, 1942. Juicy yellow-fleshed clingstone plum with excellent sweet flavor. Tough yet thin skin peels easily. Large deep red fruit with a golden blush presumably named in honor of the beautiful red catlinite rock of Pipestone, MN, home of one of the most famous Native American quarries, long considered to be a sacred site by the tribes who mined the quartzite rock for their pipes. Designated a national monument in 1937, Pipestone makes an appearance in Henry Wadsworth Longfellow's famous 1855 poem "The Song of Hiawatha." Vigorous reliable tree. Z3.

324A Pipestone, $31.25



Purple Heart Late Summer. Elwyn Meader intro, Enfield, NH. Medium-sized fruit with red-purple skin and flesh. The most delicious plum we grow. Meaty, mild and rich with no astringency. We love it. Origins shrouded in mystery. It was brought to the great plant breeder Professor Elwyn Meader (see p. 49) by a fellow who passed away before Meader could ascertain the plum's origin. It also has uncertain pollination requirements and is almost certainly not your typical hybrid. We planted ours next to Black Ice: both are fruiting well. Underwood also may be a good pollinator. Not as hardy as other hybrids. Shows tip or even branch damage following colder winters in central Maine. Has shown susceptibility to black knot in some locations. Small tree. Z4/5. **ME Grown.**

325A Purple Heart, $31.25



South Dakota Late Summer. SD 27. *P. a.* Unknown parentage. U Minn/SD Ag Exp Stn, 1949. Small-to-medium fruit has firm yellow skin with bright red blush. Medium-firm yellow flesh is meaty, juicy, sweet. Excellent fresh-eating quality. Fully freestone. Because of its very long flowering period and American pedigree, we recommend South Dakota as a pollinator for all hybrid plums. In our orchard it's still blooming when the other plums have dropped their flowers. Also ripens after the other hybrids are done. Developed by NE Hansen before 1907. One of Hansen's students took it to the breeding program at the University of Minnesota where it was later introduced. Vigorous tree. Z3. **ME Grown.**

326A South Dakota, $31.25

Toka Late Summer. (*P. a.* x *P. sim.*) NE Hansen intro, SD Exp Stn, 1911. Rosy red fruit, up to $1^{1}/_{2}$" in diameter, mottled with darker purplish-red and covered with a faint bloom. Grower Don Johnson's comment: "Talk about flavor: candy plum." Ed Fackler called Toka the best-flavored plum he grew in his Indiana orchard. Sweet, distinctive, meaty and flavorful. Not real juicy. Somewhat freestone. Extremely vigorous tree blooms heavily every year. Diligent pruning may be required to keep it from becoming a bit of a monster. Considered a good pollinator for other hybrid plums. Z3. **ME Grown.**

327A Toka, $31.25

Underwood Midsummer. MN 91 [(*P. sim.* x *P. sal.* Shiro) x *P. a.* Wyant] U Minn, 1921. Medium-to-large 2" dull red fruit. Firm sweet juicy golden-yellow semi-freestone flesh, very good for eating and cooking. Long picking season. Blooms earlier and longer than most hybrids and appears to be a very good pollinator for other hybrid plums, including Purple Heart. Northern Maine grower Steve Miller considers it one of his most reliable bearers. Long ripening season. Vigorous large spreading tree. Z3. **ME Grown.**

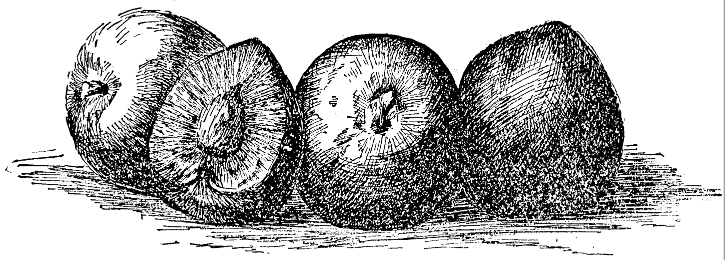
328A Underwood, $31.25

Waneta Midsummer. (*P. sal.* Apple x *P. a.* Terry) NE Hansen intro, SD Exp Stn, 1913. Released when hybrid plums were an important and commercially viable crop. Named after a Yanktonai youth who won fame in the War of 1812 and later became a great chief. Large, somewhat pointed, $1^{1}/_{2}$–2" reddish-maroon fruit. Sweet tender translucent orange flesh is very juicy but not dripping. Medium-thick skin, tart and easy to peel. Delicious overall taste. Hansen said of Waneta: “My belief is that in this variety I have combined the best points of the native and the Japanese plum. It is probably the largest [fruit] of over 10,000 seedlings.” Early blooming healthy open spreading tree bears reliably in our orchard. Z3. **ME Grown.**

329A Waneta, $31.25

Hybrid Plum Collection Our choice of 7 trees to begin your plum orchard, including at least two pollinators, one of which will be an American Plum Seedling, *P. americana*. **Plant trees in one cluster**, with about 3–6' between trees. Let the branches grow right into one another while still keeping them pruned to allow in plenty of air and light. Trees are individually labeled. **ME Grown.**

330A Hybrid Plum Collection, bundle of 7, $194.00

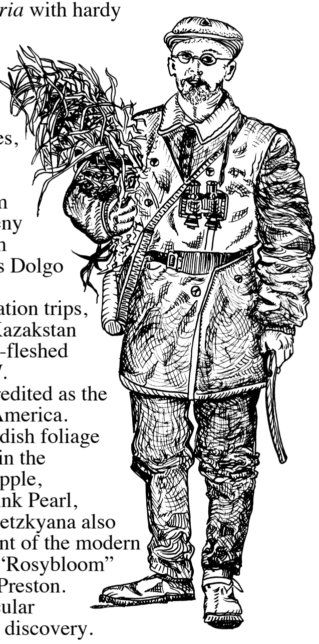


Niels Hansen: Hardy Plums & Red-fleshed Apples

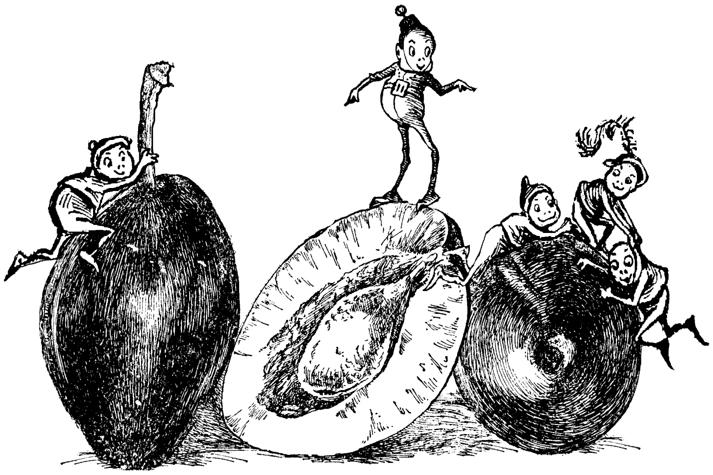
Born in Denmark, Niels Ebbesen Hansen (1866-1950) moved to Iowa as a young boy and eventually to South Dakota where he taught for many years at South Dakota State College of Agriculture. His quest was to introduce fruit varieties hardy enough to thrive in the coldest climates of North America. While the Upper Midwest and the prairie provinces had plenty of hardy native fruit, most of it was of marginal dessert quality. He operated a huge breeding program using plant material he discovered during several fruit-exploring trips to Asia and throughout the Upper Midwest. As a result, he introduced several hardy grapes, currants, gooseberries, sand cherries, cherry plums and more.

By crossing the hardiest American species with high-quality, large-fruiting, but less-hardy Asian selections, Hansen developed the hardy “hybrid plum.” He gave many of his introductions Sioux names; Hanska, Kaga, Kahinta, Pembina (**323A**), Tecumseh, Toka (**327A**) and Waneta (**329A**) have all appeared in Fedco Trees catalogs over the years.

In his apple-breeding program, he crossed hardy native crabapples, primarily *Malus ioensis* and *M. coronaria* with hardy dessert and cooking apples, including Duchess of Oldenburg and others. (Although hardy by our eastern standards, even Duchess was not nearly hardy enough for Hansen.) He introduced dozens of these apple crosses, some small enough to be called crabapples, several of which we are currently trialing. His breeding program also included the first-generation progeny of seeds he brought back with him from Russia, the most famous of which is his Dolgo crab (**483C**).



During one of his Asian fruit-exploration trips, he met a man named Niedzwetzky in Kazakstan who had a tree in his yard that bore red-fleshed apples. That apple became known as *M. niedzwetzkyana*. Hansen is generally credited as the one who brought this amazing tree to America. Niedzwetzkyana, with its red flesh, reddish foliage and pink or red flowers, is somewhere in the parentage of nearly every red-fleshed apple, including Redfield (**178C**), Redford, Pink Pearl, Hidden Rose and many others. Niedzwetzkyana also played a integral role in the development of the modern ornamental crab, including the pivotal “Rosybloom” work of the Canadian breeder Isabella Preston. We wouldn’t have any of those spectacular pink-flowering crabs without Hansen’s discovery.



European plums

P. domestica Delicious fresh and often grown commercially for prunes. A true prune is a plum that can be dried without the pit fermenting. We’ve heard recommendations to blanch the plums for 45 seconds before drying them. European plums produce smaller fruit and are generally not as hardy as the hybrid plums, though they can handle heavier soils and are less prone to brown rot. Unlike hybrids, they are prone to the fungal disease black knot, which looks like black chewing gum and appears on branches. While not necessarily fatal, it must be kept in check by removing and destroying infected branches. Trees grow upright and are usually trained to a central leader. Although **European plums are self-pollinating**, planting two different varieties will improve pollination. (Will not pollinate hybrid plums.) (3-6' trees)

Green Gage Mid-Late Summer. Unknown origin, maybe *P. d.* x *P. institia*. Probably Armenia, long before 1500. Also called **Reine Claude**. Often considered the best of all dessert plums. Small round semi-freestone yellowish-green fruit sometimes mottled with red has tender juicy melting flesh with rich flavor. A favorite in Europe for more than 500 years. Long referred to as Armenian plum, suggesting its possible point of origin, though no one knows for sure. Found its way to Greece and Italy and then introduced into France in the early 16th c. where it acquired the name Reine Claude in honor of the wife of Francis I. Later brought to England by the Gage family. While a number of Gages have been selected over the years, Green Gage is the original. Medium-sized tree bears heavily. Not long-lived. Fruit susceptible to cracking. Z4.

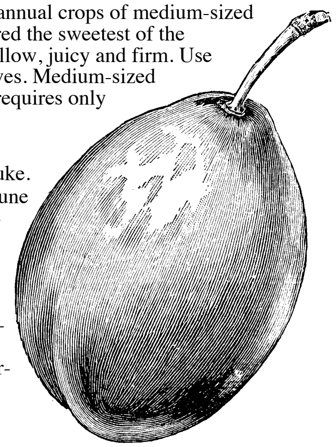
334A Green Gage, $31.25

Mount Royal Late Summer. Chance seedling, Outremont, Quebec, before 1903. Popular plum in Quebec and the northern U.S. for many years. Also called **Mont-Royal**. Discovered by Mr. Corse in or near Montreal sometime between 1830 and 1850. Bears abundant annual crops of medium-sized roundish dark purple fruit. Often considered the sweetest of the European plums. The flesh is greenish-yellow, juicy and firm. Use fresh, dried, frozen, canned and in preserves. Medium-sized tree is open with good crotch angles and requires only moderate pruning. Z3. **ME Grown.**

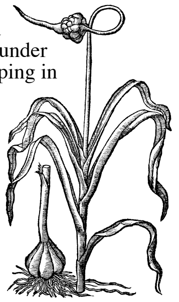
335A Mount Royal, $31.25

Stanley Late Summer. Agen x Grand Duke. NY Stn, 1926. Most popular European prune plum in America with the possible exception of ‘Italian.’ Excellent for cooking, eating, canning and drying. Medium-to-large oval fruits with dark blue skin. Green-yellow firm but tender juicy fine-grained sweet flesh. Reliably bearing fast-growing adaptable medium-to-large funnel-shaped tree produces healthy vigorous annual crops. Z4.

337A Stanley, $31.25



Plum Curculio... and garlic



Plum curculio is a small pesky insect, a terrible plum and apple pest. We have read that laying sheets of cardboard under plum (and apple) trees will smother the PC pupae developing in the soil. Many organic growers spray Surround clay powder on their trees to combat this weevil. (See the Organic Growers Supply section of the Seed catalog for this and other orcharding supplies.)

Many years ago we planted garlic near one of our apple trees and neglected to harvest all the bulbs. Now we have a small colony of garlic plants around the tree. Recent reports are touting garlic as a curculio deterrent. Anecdotal evidence suggests the garlic may be working at our place. Plant more garlic!

Small Fruits & Berries

Raspberries *Rubus* spp. We love raspberries: fresh or frozen, in smoothies, jam and especially pie. We even like the foliage—best taken from the first-year primocanes—which makes a delicious and healthful tea. A leaf and fruit vinegar is very high in minerals, and the leaf tea makes a great astringent and tasty tonic. The root bark is also medicinal. Native to North America, Europe and Asia, they are usually identified as *R. idaeus* or *R. i.* var. *strigosus*. 53 different *Rubus* species and subspecies live in Maine.

A second variety is not needed for pollination.

Please note: Raspberries have very fine, fibrous roots. Often they do not sprout from the plant stem after planting. This is OK. Be patient! Keep them well watered and they should all break dormancy, sprout from the roots and thrive for many years to come. All of our raspberry canes are well rooted, bare root and certified virus-free.

Everbearing Raspberries bear on first-year canes (primocanes). Everbearing types are particularly desirable for northern growers because they can die (or be cut) to the ground and still produce a sizable crop the following year. In central Maine the first of these ripens in mid-late August.

Anne Late. JEF-b1 (Amity x Glen Garry) U of MD, 1998. Everbearing sweet flavorful pale yellow raspberry ripens in fall. Large cohesive conic fruit stores decently, is firmer than other yellows. Semi-vertical canes may sucker less than most everbearing types. Cut it entirely to the ground after the season is over. Resistant to phytophthora root rot. **PVP**. Z4.

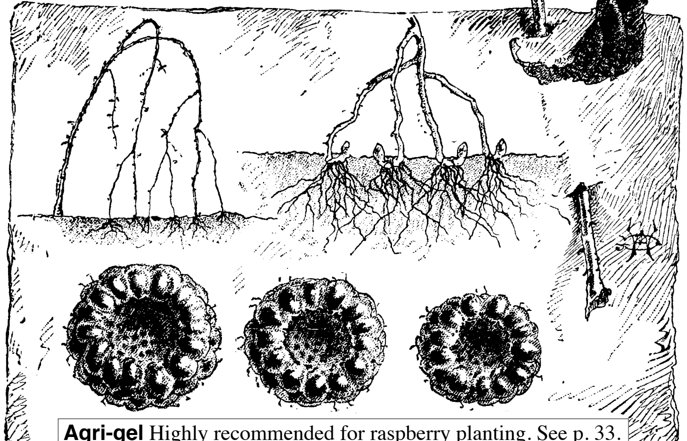
341A Anne Raspberry, bundle of 10, $29.50

August Red Late. NH R7 [Durham x NH 102 (dwarf F2 seedling x Taylor)] x NY 287 [NY 18810 (Marcy x Indian Summer) x NY 20990 (*R. strigosus* selection)] Developed by EM Meader, UNH, 1973. Considered the hardiest of the everbearing types—the last hope when no other raspberry will survive. Medium-large crimson fruit has excellent flavor. Compact 3' bush bears earlier than other everbearers, even Polana. Productive midsummer, about Aug. 10 in central Maine. We are very pleased to offer this rare variety, bred by Elwyn Meader (see page 49), custom-propagated for us by Nourse Farms, and grown out at North Branch Farm in Monroe. Z3. **ME Grown.**

342A August Red Raspberry, bundle of 5, $29.50

Polana Late. Heritage x Zeva Herbsternte. Research Inst of Pomology and Floriculture, Brzezna, Poland, 1991. Very early fruiting everbearing red raspberry has performed very well in our Fedco trials. Large firm berries with very good flavor on vigorous and productive short canes. Ripens in late August or early September in northern districts. According to David Handley of UMaine, "as near a thing to a sure bet." Easy to pick: the berries hang off the tops of the plants. Suckers freely. Z4.

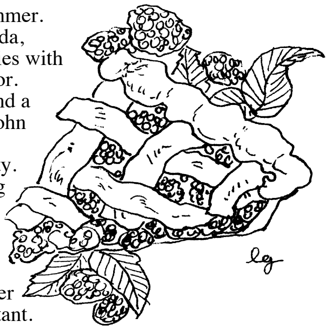
343A Polana Raspberry, bundle of 10, $29.50



Agri-gel Highly recommended for raspberry planting. See p. 33.

L624A Agrigel, $3.00

Summer-bearing Raspberries bear on second-year canes (floricanes). Midseason berries ripen around late July in central Maine.



Boyne Early-Mid. Chief x Indian Summer. Morden Research Stn, Manitoba, Canada, 1960. Round-conic medium-sized berries with an intense deep dark almost purple color. Strong aromatic tart raspberry flavor and a perfect medium-soft texture. Grower John Meader speaks glowingly of Boyne, calling it "an excellent, excellent variety. Boyne is the one to beat if you're going to introduce a new raspberry." Leaves tend to curl down over the fruit making it harder to pick if you're in a hurry. According to friends who make honey and fruit butters, there is no better raspberry for processing. Disease resistant. Extremely hardy. Z3.

344A Boyne Raspberry, bundle of 10, $29.50

Killarney Early. Chief x Indian Summer. Morden Stn, Manitoba, Canada, 1961. Produces medium-to-large round crumbly fruit of excellent quality over a long season. Deep red summer-bearing cultivar ripens after Prelude and before Nova. Same parentage as Boyne but firmer texture and brighter color. Sturdy 4' canes. Hardy and yields consistently. Z4.

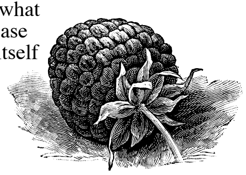
345A Killarney Raspberry, bundle of 10, $29.50

Latham Mid. MN4 (King x Loudon) U Minn, 1920. A standard raspberry for almost a century, extremely popular and widely grown. Large bright red 1" fruit is roundish, firm, a little crumbly and sprightly sweet, full-flavored and aromatic. Great for fresh eating, canning, freezing, jam, juice or pie. Ripens over an extended season making it an ideal candidate for the home garden. Canes are 4–5' tall and highly productive. Not as spiny as most raspberries. Widely adaptable and very winter hardy. Disease resistant. Z3.

346A Latham Raspberry, bundle of 10, $29.50

Royalty Purple Mid. (Cumberland x Newburgh) x (Newburgh x Indian Summer) NY Stn, 1982. Their distinctive flavor is different from the red raspberries, with a hint of black raspberry. A favorite for fresh eating among those who know it. Cohesive fairly firm large berries make outstanding jam and jelly, too. Extremely robust minimally suckering plants are very productive and open-formed; the berries are eye-level and easy to pick. Ready to harvest when they are deep purple, somewhat later than the reds. Plant in hills (see sidebar). Disease resistant. Usually considered Zone 4 but is proving itself into Zone 3 with occasional slight tip dieback. Z3/4.

347A Royalty Purple Raspberry, bundle of 5, $29.50



Raspberries and Blackberries

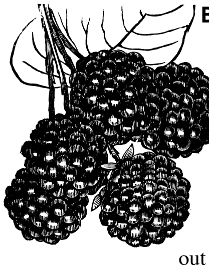
Cane fruits have shallow perennial roots. They prefer full sun, good air circulation and well-drained soil rich in organic matter. Avoid soils where tomatoes, peppers, potatoes, strawberries or wild brambles have grown. A well-kept patch can last 10–20 years.

Prepare planting holes by adding composted manure (15 bushels dry or 10 bushels fresh per 100 sq ft) and make each large enough to spread out the roots. Do not allow the fine roots to dry out. We suggest soaking roots in Agri-gel (**L624A**, see page 33) for 1–2 hours before planting. Plant 1–2" deeper than the nursery line. Mulch with a thick layer of woodchips. Fertilize liberally each spring with up to 100 lbs manure or compost, 8 lbs bloodmeal or 14 lbs soybean meal per 100 foot row. Some sources recommend additional nitrogen feeding each June and August. Plants require 2" water per week during the growing season.

- **Everbearing raspberries**: Plant 9–15" apart. Because everbearing types bear fruit on first-year and second-year canes, you have a couple of options. In warmer districts, you can leave the first-year canes to overwinter after they fruit. The following year, you will get a light crop in early summer from those now two-year-old canes, followed by a larger crop later from the new first-year canes. In colder areas generally you would cut all canes to the ground in late fall after the leaves drop, or in early spring; new first-year canes will fruit in mid-late summer.

- **Summer-bearing raspberries**: To make a hedgerow, trellis between two wires about 3–4' off the ground and 18–36" apart. Space plants 2' apart. After harvest, prune to the ground the canes that carried fruit (or remove them the following spring). Thin the fresh first-year canes to about 3–4" apart. They will bear fruit next year. During the growing season cut back canes to 5' if they are bending over severely.

- **Purple and black raspberries** and **blackberries**: Plant in hills 3–4' apart, 3–4 plants per hill. Tie to a center post for support, if needed. Basic pruning is the same as summer-bearing raspberries. As they fill in, thin to 5–8 canes per hill. During the early summer, pinch back tip of first year canes to $2\frac{1}{2}$–3' tall. This will encourage lateral fruiting branches. You may run a wire between hills for lateral branching but this is not necessary. In the following spring, cut these fruiting laterals back to 8–12 buds.

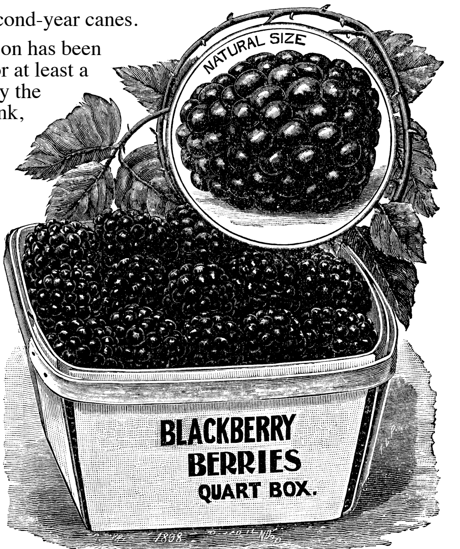


Black Raspberries bear on second-year canes.

Bristol Midsummer. Watson Prolific x Honeysweet. NY St Ag Exp Stn intro, Geneva, NY, 1934. Medium-large firm glossy black fruit with excellent sweet blackberry-like flavor very distinct from reds. Hardy, vigorous and high-yielding. They ripen earlier in central Maine than most raspberries. USDA has found black raspberries to have some of the highest levels of antioxidants of any cultivated fruit. Unlike red raspberries, which sucker and spread, "black caps" stay where they are planted unless you let the long canes arch way out and root themselves in the ground. Pile a little soil over the rooting spot and in a year or so you'll have plants to spread around the neighborhood. Susceptible to anthracnose and tolerant of powdery mildew. Z4.

348A Bristol Black Raspberry, bundle of 5, $29.50

Blackberries bear on second-year canes.

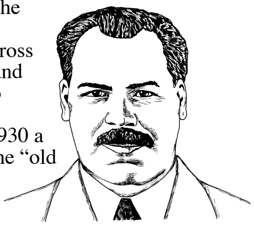


Nelson Midsummer. Nelson has been surviving Maine winters for at least a century. Introduced to us by the descendants of Nelson Fronk, whose 1928 family photograph taken on their farm northeast of Farmington shows the blackberries growing next to the barn. John Meader grows Nelson and calls it "exceptionally hardy," one of the most enduring blackberries he has ever grown. Tall sturdy upright inch-thick canes can be grown on posts but also do well free standing. Fruit is moderately large and quite juicy with true blackberry taste. Highly productive: 16–18 blossoms on the central stalk is the most John has ever seen on any blackberry. He gets four good pickings from his patch over two weeks in mid-August. Excellent jelly and good fresh eating. Disease resistant and certified virus-free plugs. Like all blackberries, spreads quickly so give it room. Z4, maybe Zone 3. (well-rooted plugs)

350A Nelson Blackberry, bundle of 5, $29.50

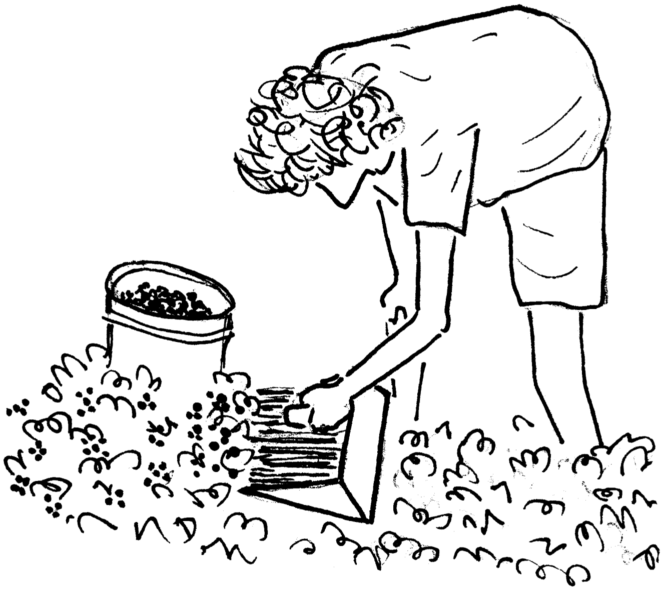
Nikolai Vavilov: Hero of biological diversity

In the early 20th century, Russian botanist and plant explorer Nikolai Ivanovich Vavilov (1887-1943) collected more plants than anyone else in the history of the world. On horse, he frequently endured long and dangerous expeditions, traversing five different continents to collect seed from grains, fruits, vegetables, nuts and tubers to bring back to his famine-stricken homeland. In his lifetime, he created the largest collection of seeds in the world, with more than 250,000 samples from 64 countries. At a time when the theories surrounding genetics were being widely debated, Vavilov was among the first scientists to believe that breeding biological diversity into food crops would improve yields for farmers.

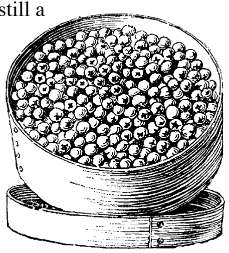


Lenin supported Vavilov, who by then held the highest agricultural position as director of the scientific institutes and experimental stations across the country. he was highly respected in Russia and across the globe. However, when Stalin came to power in 1924, fascism created a deep and dark divide on the accepted theories of genetics. in 1930 a horrible famine took the lives of millions, and the "old guard bourgeois" geneticists were soon blamed and persecuted for not making progress fast enough in increasing yields. in reality, it was Stalin's collectivization of farms and distribution of crops under state power that caused millions to starve, but a scapegoat was needed. One by one, the geneticists working in Vavilov's institutes were arrested and killed. Eventually, he, too, went missing on his last plant expedition in Ukraine. He died of malnutrition three years later in a gulag. Meanwhile, World War II came to Russia when Germany took Leningrad in a 28-month siege. The remaining devoted scientists at the seed bank took up arms and locked themselves in the building to guard the precious collection from the Nazis and starving people out in the streets. A dozen of those protecting the seeds starved to death themselves, bags of rice sitting on their desks.

The N.I. Vavilov Institute in St. Petersburg is still one of the world's largest seed banks. To read an in-depth account of his fascinating and tragic life, we highly recommend *The Murder of Nikolai Vavilov* by Peter Pringle and *Where Our Food Comes From: Retracing Nikolai Vavilov's Quest to End Famine* by Gary Paul Nabhan.



Lowbush Blueberry *Vaccinium angustifolium* 6-24" and spreading. Blueberry growers in Maine usually don't bother with the "lowbush" distinction; to them, this is the only true blueberry. Folks from away may know these berries from the grocery freezer, labeled Maine Wild Blueberries. Though plants and berries are diminutive, the taste is supreme. Lustrous blue-green medicinal foliage is good in teas and turns an amazing combination of bronze, orange and scarlet in the fall. Grown in Maine long before Europeans came Downeast, blueberries are still a local favorite and cultivated on thousands of acres.



To speed harvesting, berries are usually raked rather than hand-picked. You comb the rake a bit into the bushes (but not deeply so!), tilt it back and the berries pop off and roll into the pan. As the saying goes, "the lighter the hand, the more berries in the pan." You will also inevitably accumulate small twigs and leaves and various other odds and ends. Best raking is done on a breezy day. Lift the rake above your pail (we use a 5 gallon bucket) and pour. Ideally the berries will stream into the bucket while the twigs and leaves flutter off in the wind. Native to northeastern U.S. Spreads by seed and rhizomes. Transplants will gradually form colonies but can be slow to get established. Z2. **ME Grown.**

Lowbush Blueberry Sod Squares 6x6" sods from blueberry fields of Ewing Fruit Co. in Warren, ME.

353A Lowbush Blueberry Sod, $15.75
353B Lowbush Blueberry Sod, bundle of 5, $68.75

Lowbush Blueberries

Woodsy dry poor acid soil (pH 4.0–5.2) is a prerequisite for lowbush blueberries. If you've got white pine, you're probably all set. Plant 12" apart each way and cultivate as a groundcover. **Generally self-pollinating**; other blueberries nearby will help ensure pollination. Full sun is best for maximum fruit production. Keep your patch weed free, and keep it watered while it's getting established.

Highbush Blueberries

Vaccinium corymbosum are native to North America. Many of Maine's lakes are lined with massive stands of highbush blueberries. Grazing the shore requires only time and a suitable vessel; we prefer kayak or canoe. The beautiful vigorous shrubs are extremely easy to grow at home, productive and reliable. By planting several varieties, you can harvest berries from early July through most of August. Bears first crop 3–7 years after planting. Productive for at least 20 or 30 years. Berries may turn blue before they reach their peak flavor. Leave them on the bush until they are fully ripe. Check a few before you pick them all! **Two varieties are required, three or more recommended, for pollination**. (1-2' transplants)

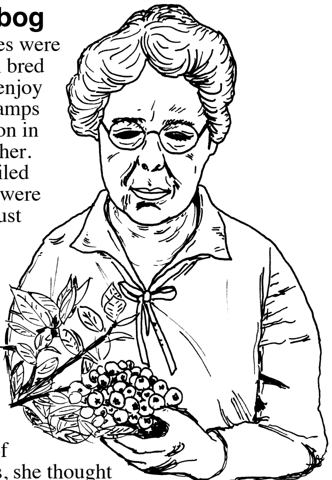
Blueray Early-Mid. 4-6' (GM 37 x CU-5) USDA, NJ, 1955. Large firm dark blue berries of high dessert quality in small clusters. Considered the best-tasting by nearly everyone who grows highbush blueberries. Very vigorous bush with upright spreading habit. Consistently productive. Z4.

354A Blueray Blueberry, $14.50

Elizabeth Mid-Late. 5-6'. Introduced in 1966 by Elizabeth White of Whitesbog, NJ. Friend and avid fruit grower Dan Kennedy of Searsmont, ME, grows 17 different varieties of highbush and rates Elizabeth and Blueray as his top favorites. He describes the bushes as bearing dense clusters of large fruit with a balanced flavor of sweet and tart. Stores well in refrigeration. Large vigorous upright shrub has strong spreading lateral branches. Z4.

355A Elizabeth Blueberry, $14.50

Elizabeth White of Whitesbog



In the early 1900s, highbush blueberries were still out in the wild. They had not been bred or cultivated into the large berries we enjoy today. One had to tromp around in swamps to eat them and there was huge variation in the fruit quality from one plant to another. Attempts at growing them on farms failed because the soil was too rich and they were eventually believed to be a plant that just couldn't be cultivated.

That all began to change in 1910 when Elizabeth White (1871-1954), a cranberry farmer from the Pine Barrens of New Jersey, noticed a USDA report by Frederick Coville, a well-known botanist, about amending soil to be more acidic for trialing blueberries. Her father had pioneered cultivating cranberries in bogs in the mid-1800s and having had a lifetime of experience farming acid-loving berries, she thought her farm would be just the place for blueberry trials. White had long observed the "swamp huckleberries" in her area. She pitched her idea to Coville—the start of their 18-year collaboration—and paid local folks to go out to the bogs to locate blueberry plants with the largest fruit. When someone led her to a promising plant, she named it after them. She worked with the USDA to successfully propagate these from cuttings and create many of the cultivars grown today, including Jersey (**358A**) and Bluecrop. She is largely responsible for bringing blueberries out of the swamp and into the market.

Today there are nearly half a million acres in highbush blueberry production in the U.S. As the first female member of the Cranberry Growers Association in 1942 she said, "I always shirked the woman's job of serving meals and instead stuck close to my father's side, eager to hear all the cranberry talk." This year we are offering Elizabeth (**355A**) and Rubel (**362A**). These wild varieties maintain their strong flavor because they have not been bred repeatedly like so many cultivars after them. One hundred years later, some of the original bushes are still producing fruit on her farm.

Elliott Very Late. 4-6'. Burlington x [Dixi x (Jersey x Pioneer)] USDA, 1974. A real season-extender. Considered the latest of all varieties, Elliott ripens two weeks after Jersey. Loose clusters of medium-sized very firm mild-flavored light blue berries. Slightly spreading somewhat bushy upright plant is highly productive every year, in part because it blooms late and escapes spring frosts. Z4.

356A Elliott Blueberry, $14.50

Friendship Mid-Late. 3-4'. U of WI, 1990. Open-pollinated seedling found in an isolated stand of *V. corymbosum* and *V. angustifolium* near Friendship, WI. Lowbush-highbush type selected for hardiness and sweet wild blueberry flavor. Small-medium berries are dark blue with waxy bloom. Attractive foliage in spring and fall. We're excited to offer this for the first time and want to know what you think! Z3-4.

357A Friendship Blueberry, $14.50

Jersey Mid-Late. 5-7'. Rubel x Grover. USDA, 1928. The beloved old standard of blueberry introductions to which new varieties are compared. Medium-to-large dark blue berries in large loose clusters. Vigorous erect hardy bush. Productive, adapted to a wide range of soils, highly praised, easy to grow and suited to the New England climate. Z4.

358A Jersey Blueberry, $14.50

Nelson Late. 5-6' Bluecrop x G-107 (F-72 x Berkeley) USDA, NJ, 1989. Firm large dark blue berries in loose clusters taste great, similar to Bluecrop. Particularly vibrant red fall foliage. Upright vigorous high-yielding bush. Z4.

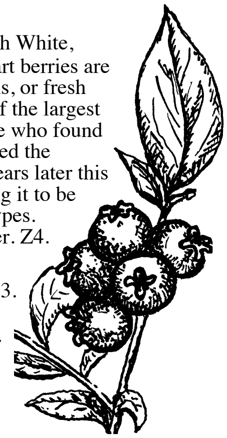
359A Nelson Blueberry, $14.50

Northblue Mid. 2-3'. MN 360 (B10 x US3) U Minn, 1983. Very hardy highbush-lowbush cross. Large dime-size dark blue fruit especially good for freezing and cooking. Sweet wild flavor. This half-high shrub yields 3–4 quarts per plant. Good choice where space is limited. Z3.

360A Northblue Blueberry, $14.50

Patriot Early-Mid. 4'. US3 (Dixi x Michigan LB-1) x Earliblue (Stanley x Weymouth) U Maine, 1976. Partial lowbush parentage. Adaptable to many soil types. Productive berry will fill your super bowl *every* year! Large firm berries with excellent flavor. Upright open spreading bush. Tolerant or resistant to some strains of soil fungus. Hardy. Z3.

361A Patriot Blueberry, $14.50



Rubel Mid. 5-7' Wild strain discovered by Elizabeth White, Whitesbog, NJ, early 1900s. Small firm light blue tart berries are fantastic for processing, baking into pies and muffins, or fresh eating. White asked local townspeople to find 100 of the largest fruiting bushes—the best ones she named after those who found them. Rubel is named for Rube Leek—White dropped the "-eek" because it "savored of onions." A hundred years later this variety is still being cultivated with research showing it to be one of the highest in antioxidants for all highbush types. Parent of the old favorite Jersey. Consistent producer. Z4.

362A Rubel Blueberry, $14.50

St. Cloud Early-Mid. B19 (G65 x Ashworth) x US3. U Minn, 1990. Lowbush-highbush cross with firm dark blue medium-large highly flavorful sweet fruit. We're excited to see how this newer offering compares to our old favorites. Crisp texture, stores well in refrigeration. Foliage turns orange in fall. Short spreading canes reach 4' at maturity. Z3.

363A St. Cloud Blueberry, $14.50

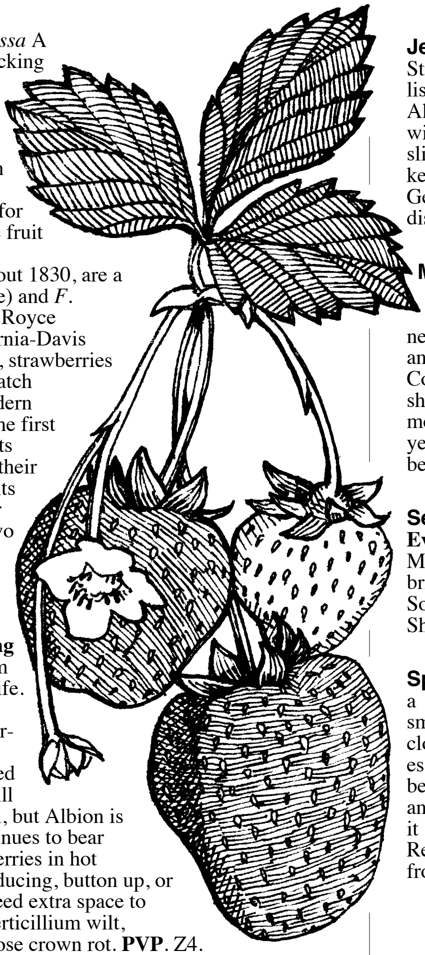
Highbush Blueberries are shallow-rooted and like light acid soil (pH 4.0–5.2) with plenty of organic matter, good drainage, and plenty of water. Space them 3–6' apart (3' for the shorter varieties) in rows 8–10' apart. If your soil is lacking acidity, add peat, woods humus, or 1 cup elemental sulfur per bush.

Dig a hole at least twice the size of the root ball. If you use peat, soak it and then mix it with soil at a one-to-one ratio. Plant at the same depth as in the nursery. Do not let the roots dry out! Pack the soil firmly and water thoroughly. Plants require at least 1" water per week during the growing season. On most soils, blueberries require regular applications of nitrogen. In the spring, apply a high-nitrogen fertilizer, such as $^{1}/_{2}$–1 qt composted hen manure per plant.

Fruit is produced on vigorous one-year shoots off healthy canes. As canes age they become twiggy and less productive. Begin pruning after three years. Head back long pieces of new growth for a bushier plant. Cut out weak or dead canes and dead tips. Each bush should be allowed to grow 6–10 canes varying in age from 1–6 years old. Thereafter, remove dead canes and those over 6 years old to encourage new replacement canes. Bushes with regular moderate pruning produce the most berries.

Berries may need net protection from birds. One of the best arrangements we've seen is John Meader's netted "house" in Buckfield. He has about 40 bushes growing under a framework made of posts and 2x4s and completely covered in netting.

Competition with grass may weaken and kill your blueberries. Mulch heavily (3–6" or more) every year with pine needles, cardboard, wood chips, hay, sawdust, even old slab wood. When using sawdust you may want to compensate by adding extra nitrogen.



Strawberries *Fragaria* x *ananassa* A major highlight of every summer is picking strawberries. In central Maine strawberry season usually coincides with the summer solstice. Although no one knows where the common name *strawberry* originated, idle speculation is that it comes from the practice of putting straw down between the rows for pickers to sit on while they sample the fruit and catch up with each other.

Modern strawberries, developed about 1830, are a hybrid of *F. chiloensis* (native of Chile) and *F. virginiana* (native of North America). Royce Bringhurst of the University of California-Davis developed day-neutral, or everbearing, strawberries from wild plants found in Utah's Wasatch Mountains. He crossed these with modern commercial varieties and introduced the first everbearers in 1980. Everbearing plants produce berries from June to October their first year of growth. June-bearing plants produce their second year. See sidebar for cultural information about these two types.

50 plants will plant from 50–100'. (virus-free bare-root stock)

Albion CN220 (Diamante x Cal 94.16-1) UC Davis, 2006. **Everbearing** strawberry with very large conical firm fruit, excellent flavor and good shelf life. High yielding though requires more water and nutrients than other everbearers. Fedco's Alice Percy switched to Albion from Seascape and never looked back. She says, "The best Seascape will have better flavor than the best Albion, but Albion is definitely no slouch for flavor. It continues to bear reliably and produce large delicious berries in hot weather, when Seascape will stop producing, button up, or become bitter." Plants are large and need extra space to produce bigger berries. Resistant to verticillium wilt, phytophthora crown rot, and anthracnose crown rot. **PVP**. Z4.

L366A Albion Strawberry, bundle of 50, $20.00

Earliglow Early. MDUS 3861 [MDUS 2359 (Fairland x Midland)] x [MD2713 (Redglow x Surecrop)] MD Ag Exp Stn, 1966. Medium-sized berries, best for fresh eating and freezing. Excellent flavor for an early berry. A favorite of strawberry growers Shaun and Benji at Sand Hill Farm. Resistant to red stele and verticillium wilt. Hardy, but considerably more productive in southern New England than up north. Z3.

L367A Earliglow Strawberry, bundle of 50, $20.00

Honeoye Early-Mid. NY 1409 (Vibrant x Holiday) NY Station, 1979. Folks pronounce it *honey-eye*. Tough, hardy, vigorous, extremely productive and easy to grow. The freezer-filler of the strawberry patch. Produces large conic bright red fruit over a long fruiting season. Firm flesh with tart—and surprisingly good—flavor. Excellent freezing quality. A week before Jewel. Probably the most popular commercial berry in the Northeast. Plant in well-drained soil to avoid red stele. Susceptible to verticillium wilt. Z3/4.

L368A Honeoye Strawberry, bundle of 50, $20.00

Jewel Mid-Late. NY 1324 [(Senga Sengana x NY E-58) x Holiday] NY Stn, 1985. Shaun Keenan of Sand Hill Farm suggested we add Jewel to our list; he even went so far as to say that Jewel tastes almost as good as Sparkle. Although we don't think we'd go quite that far, we were very impressed with the berry. Large shiny red perfectly shaped fruit is firm, sweet and slightly aromatic. Unlike Sparkle, Earliglow and many other varieties, Jewel keeps its size all season. Extremely popular with commercial growers and Gene's favorite. Good freezing quality. Low incidence of fruit rots and foliar diseases. Not resistant to verticillium or red stele. Z4.

L369A Jewel Strawberry, bundle of 50, $20.00

Mara des Bois (Gento x Osara) x (Red Gauntlet x Korona) Hybridized by Jacques Marionett, Soings-en-Sologne, France, 1991. **Everbearing** strawberry claimed to be the most flavorful and fragrant of the day neutrals, often referred to as "gourmet." Berries are high in methyl anthranilate, the volatile compound that gives them their strong fragrance. Commercially grown in France where they are sold at a premium. Shorter shelf life makes them better suited for local markets. Plants bear medium-small glossy red berries prolifically from summer into fall the first year. Second year bears a heavy spring crop with continuously ripening berries throughout the summer. Z4.

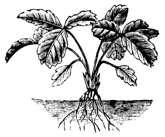
L370A Mara des Bois Strawberry, bundle of 50, $20.00

Seascape CN 49. Developed by Royce Bringhurst, UC Davis, 1991. **Everbearing** strawberry showing excellent results in Northeast trials. Medium-to-long conic high-yielding firm productive reliable fruit with bright red color and excellent flavor. Broad resistance to fungal diseases. Somewhat susceptible to common leaf spot and two-spotted spider mite. Should be hardy in all but the coldest districts. Z3.

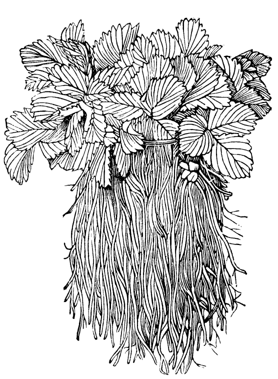
L371A Seascape Strawberry, bundle of 50, $20.00

Sparkle Mid-Late. Fairfax x Aberdeen. NJ Ag Exp Stn, 1942. Although not a favorite with commercial growers because of moderate crop size and smaller berries, we've yet to taste a strawberry that comes even remotely close to Sparkle. They possess a flavor that can only be described as the essence of strawberry. The best in an early year, the best in a late year, the best this year, last year, every year. Soft berries make delicious fresh eating and are also excellent for jams and freezing. One of its few drawbacks is that it tends to lose color in the freezer. First fruit set is large; the rest are small. Resistant to most strains of red stele. Blooms late, rarely affected by spring frost. Z3.

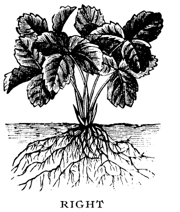
L372A Sparkle Strawberry, bundle of 50, $20.00



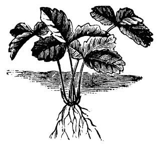
STRAWBERRY PLANTED TOO SHALLOW



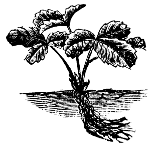
BUNCH OF STRAWBERRY PLANTS.



RIGHT WAY OF PLANTING



STRAWBERRY PLANTED TOO DEEP.



WRONG WAY OF PLANTING.

Strawberries

Keep cold or refrigerate between arrival and planting. We ship with roots slightly on the dry side. If you cannot plant them for a while, uncover the roots, mist them with water and re-cover, leaving tops exposed. Place bundle in paper bag and store on the bottom shelf of your fridge. Don't be alarmed if the tops become brown or mushy: they will generate new leaves.

Strawberries require good air drainage, well-drained fertile soil with pH of 5.8–6.2, thick mulch and full sun. Avoid soils where tomatoes, peppers or potatoes have grown in the past 4 years. Plant strawberries at the same depth as they were in the nursery, with the middle of the crown at soil level. Keep your patch free of weeds. They require 3/4–1" water per week during April, May, August, September and October. Mulch with hay or straw in late fall to protect plants over winter. In the spring, pull mulch off plants and place between rows where it will keep fruit dry and clean during the summer. It can also be raked back over the plants if frost threatens flower buds. Floating rowcover may also be used for winter and frost protection.

The 1895 Green's Nursery catalog recommends setting out strawberry plants in the evening. "Carrying plants about the fields in the glaring sun in the heat of the day, is a trying ordeal. If planted in the evening, the dews immediately fall upon plants and give opportunity for recuperation before the next morning's sun appears." We think this is good advice for all plants.

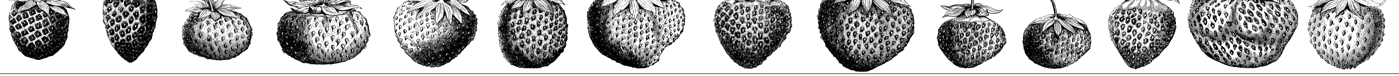
June-Bearing Strawberries

Matted Row system: Set plants 12–24" apart in rows 3' apart. Allow plants to produce runners freely and fill in the row. Remove all flowers the first year. Harvest berries the second summer. Immediately after harvest, fertilize liberally with compost or aged manure and renovate the row. By hand or with a tiller, narrow the row to 12" wide. Thin plants to 4–5" apart within the row. By this method a bed can last about 5 years. Then plow it under and start again.

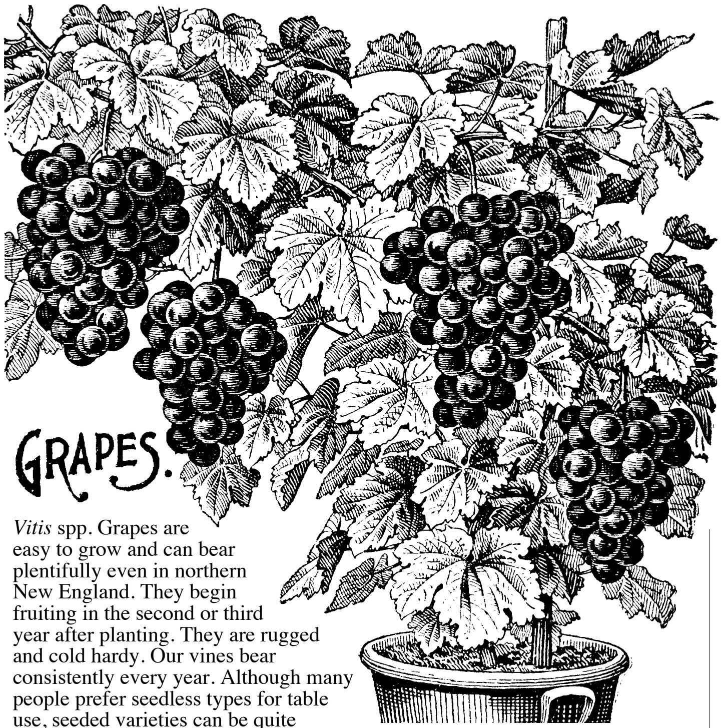
Everbearing or Day-Neutral Strawberries

These plants flower regardless of day length as long as temperatures are between 35 and 85°, and produce fruit from June to October. They are also uncommonly productive—about 1 lb of fruit per plant the first year, and slightly less the second year. Productivity peaks in August the first year. The second year, berry size decreases in the hottest weather and increases in cooler weather.

They are heavy feeders and benefit from 3–4" of manure worked 4–6" into the soil prior to planting. Plant 6–12" apart. Mulch with black plastic or thick straw immediately after planting. Remove flowers for the first 6 weeks, and remove all runners the first season. Mulch in late fall. Sidedress with manure monthly during the second season beginning in May. Till under after the second year and begin again.



GRAPES.



Vitis spp. Grapes are easy to grow and can bear plentifully even in northern New England. They begin fruiting in the second or third year after planting. They are rugged and cold hardy. Our vines bear consistently every year. Although many people prefer seedless types for table use, seeded varieties can be quite enjoyable right off the vine if you don't mind "grape nuts." Grape seeds contain an antioxidant that is twice as powerful as vitamin C.

The popularity of drinking wine is not new. The Chinese were fermenting it from hawthorn berries nearly 12,000 years ago. The first wine from grapes was likely made in Turkey or Iran 7000 years ago. Traces of red wine were found in the tomb of the Egyptian pharaoh Tutankhamen. Resveratrol is the polyphenol at the center of the red wine hoopla. It appears to have anti-carcinogenic and anti-inflammatory properties as well as anti-microbial agents that work to prevent heart disease. Red wine is good for you!

Most grape varieties are bred from a combination of different species, *V. labrusca* and *V. vinifera* being the most important. *Labrusca* is native to the eastern U.S., has a wild tart musky (foxy) flavor, and is hardy and disease resistant. Concord is the best-known of the *labruscas*. *Vinifera*, native to Europe, is extremely high quality, and is the most important wine grape in the world, but is not cold hardy and is prone to disease. *V. riparia*, used as rootstock for grafted varieties and in hybridization with *vinifera*, is very adaptable to a wide range of soils, disease resistant and very cold-hardy.

In central Maine, "very early" grapes begin ripening in mid-August, while "midseason" ripen mid-September. Late-season Concord, a standard elsewhere, does not ripen in many northern areas. **Do not require a second cultivar for pollination.** (well-rooted vines)

Bluebell Mid. MN 158 (Beta x unknown) Developed by JM Dorsey, U Minn, 1944. Our most popular seeded grape; it does everything well. Extremely hardy, to –30°, *labrusca* type ripens 2–3 weeks earlier than Concord. While it ripens beautifully from central Maine south, it may not have time to ripen in some northernmost locales. Delicious sweet flavor makes them excellent for fresh eating, jelly and juice. Clusters of medium-sized dark berries with a heavy blue bloom. Strong, productive, vigorous—but not rampant—vine. A joy to grow. Immune to most or all fungal diseases. Z3.

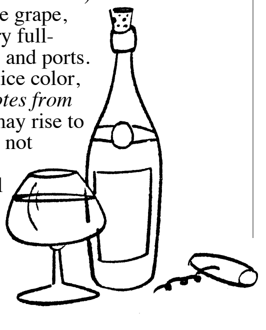
374A Bluebell Grape, $15.00

Fredonia Mid. Champion x Lucille. NY Stn, 1927. Also called Early Concord. Large thick-skinned black fruit with a bluish bloom. Slipskin type with delicious spicy flavor. Good fresh, in jams, jellies, wine or juice. Medium-sized compact cylindrical clusters. Strong productive vigorous vines, though moderately susceptible to downy mildew. Two weeks earlier than Worden or Concord. Z4.

375A Fredonia Grape, $15.00

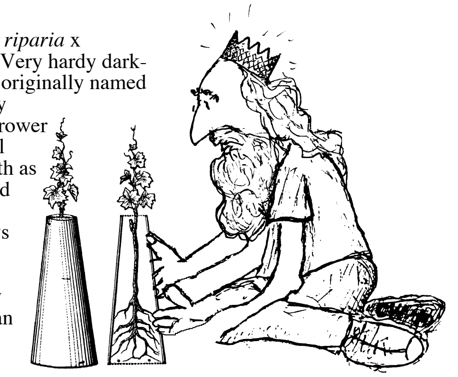
Frontenac Mid-Late. MN 1047 (*V. r.* RIP 89 x Landot 4511) U Minn, 1996. A highly praised cold-hardy red-wine grape, also excellent for fresh eating. Recommended for dry full-bodied Merlot- or Bordeaux-style table wines, rosés and ports. Very large loose clusters of small berries. Intense juice color, low tannins, high sugar and high acid content. In *Notes from the North*, John Marshall adds, "Though the sugar may rise to impressive levels early in September, the grapes are not nearly ripe. Ignore the sugar levels and wait until September 20. The acid will drop and the wonderful black-cherry flavors that will make this grape famous will multiply." Vigorous productive disease-resistant vines. Z4/5.

376A Frontenac Grape, $15.00



King of the North Mid. (*V. riparia* x Concord-type) Madison, WI. Very hardy dark-skinned table and wine grape originally named and offered by Jung's Nursery many years ago. Minnesota grower and winemaker John Marshall recommends King of the North as the one variety for both a good table grape and a decent red "Concord style" wine. He says that it's "very delicious particularly as a home wine." Produces light red sweet tasty juice. Ripens slightly later than Bluebell. Z3. **ME Grown.**

377A King of the North Grape, $15.00



Marquette Mid-Late. MN 1211 (MN 1094 x Rivat 262) U Minn, 2006. This grape has northern winemakers buzzing with excitement. The best variety this side of the Atlantic for a Pinot-Noir–style red wine. One parent, MN 1094, has both *V. riparia* and *V. vinifera* in its background. The other, Rivat 262, is a French hybrid with Pinot Noir as one of its parents. Not only is Marquette heavy with *vinifera*, the vines are also extremely cold-hardy. And there's more: sugar levels are high—in the range of 26.1 Brix—and the acid levels are lower than Frontenac. Substantial tannins add complexity. Small-medium bluish-black berries in small to medium-sized clusters. Ripens a few days before Frontenac. **PVP**. Z3.

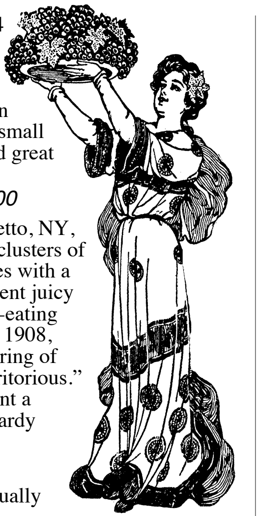
378A Marquette Grape, $15.00

Niagara Late. Concord x Cassady. Niagara Grape Co, NY, 1882. Large green slipskin berries are very juicy with a mild foxy flavor. Good for fresh eating and juice. A few years ago, Fedco's Buddy Thomas brought a huge bunch of these grapes to the warehouse in October. The enormous cluster looked unreal, like something that would grow in California but…these were grown in Maine! This grape is the source for the little frozen cylinders of grape juice you can buy at the store—we use it as a supplemental white grape in our wine. We haven't tried a batch from fresh grapes yet, but stay tuned. Hardy to Maine but may need winter protection in coldest areas. Z4/5.

379A Niagara Grape, $15.00

Reliance Seedless Very Early. Arkansas 1163 (Ontario x Suffolk Red) Arkansas Stn, 1982. Good for fresh eating or juice. Large loose clusters of tender melting sweet pinkish-red fruit with a strawberry-like flavor. Stores well in a root cellar for 1–2 months. Seems hardy although it has shown significant dieback in our Zone 4 trials. You may need to lay vines down for the winter in colder areas (see sidebar). While the literature cautions about Reliance's disease susceptibility, our vines have performed well and remained free of disease. Z4/5.

380A Reliance Seedless Grape, $15.00



Somerset Seedless Early. ES12-7-98 (ES5-3-64 x Petite Jewel) Swenson intro. Somerset is likely one of the hardiest seedless grapes available today. One of the last Swenson introductions before the renowned and beloved grape breeder passed away in December 2004. Medium-sized loose clusters with small sweet ruddy reddish-golden fruit. Crispy texture and great flavor. Easy to grow but not overly vigorous. Z4.

381A Somerset Seedless Grape, $15.00

Worden Mid. *V. labrusca*. Concord seedling. Minetto, NY, 1863. Heirloom variety. Large long broad tapering clusters of medium-sized round dark purplish blue-black berries with a heavy bloom, thin tender skin and greenish translucent juicy flesh. Sweet mildly foxy flavor with excellent fresh-eating quality. Ripens 2–3 weeks earlier than its parent. In 1908, *The Grapes of New York* recorded, “Of all the offspring of Concord, this variety is best known and is most meritorious.” Green’s catalog from 1904 states, “If you fail to plant a Worden grape you will make a mistake.” Healthy hardy vigorous productive vines. Z4.

382A Worden Grape, $15.00

Grape Collection Our pick of 4 varieties, individually labeled, a combo of hardy dessert and wine grapes.

386A Grape Collection, bundle of 4, $50.00

Grapes prefer soils with pH of 5.8–7.0. For the best grapes, provide moderate fertility, very well-drained soil and full sun. Every June we thoroughly weed the grapes under our arbor, then mulch very liberally with old hay. After that, we don’t do a thing to them except harvest in late summer and prune in late fall. Space 8–12' apart in rows 8–12' apart.

Spread the roots out, planting the crown even with the soil surface. Do not prune roots. Pack soil well. Water and mulch well. After frost danger has passed, prune vines back to 3–5 strong buds. Continue to mulch annually with hay or straw. Every few years fertilize liberally with granite dust.

Grapes require annual pruning and a trellis or arbor, though in Italy they still sometimes grow them in maple trees. All systems for growing grapes involve removal of most growth in spring or late fall to encourage new canes, as fruit is produced on these canes. There are many systems for training grapes. Some are suited to laying down and covering tender varieties over winter. Any good book on grape growing will show you several options. We suggest the Hudson River Umbrella or the Four-arm Kniffin system. The University of Maine offers a series of videos demonstrating different grape-training techniques. Go to: umaine.edu/highmoor/ and click on “videos.”

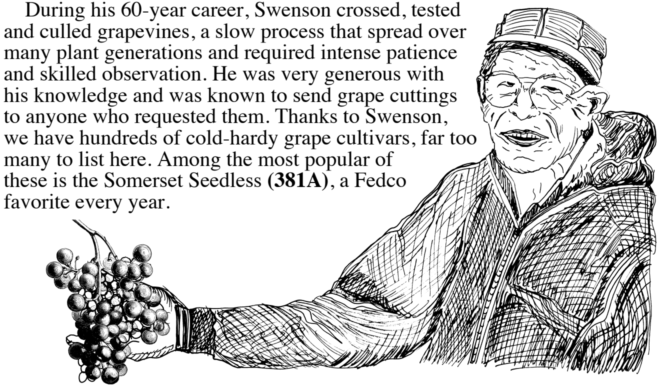
People sometimes ask about wire. The current vineyard standard is high-tensile-strength class III galvanized steel wire. The gauge should be 11 to 12.5. The wire is generally sold by weight. 100 lbs of 11 gauge measures about 2600'. 100 lbs of 12.5 measures about 3800'.

Grapes rated for Zone 5 can be grown in Zones 3 and 4. To prevent winter injury, remove the vine from the trellis in fall, lay it on the ground, and bury with just enough soil to cover. To do this, plant your new grapevine at a 45° angle. Train new shoots horizontally for at least one foot. Then, curve shoots upward to form a J shape. This creates a flexible hinge, allowing you to lay the vine down at the end of the season.

Elmer Swenson: Grape Expectations

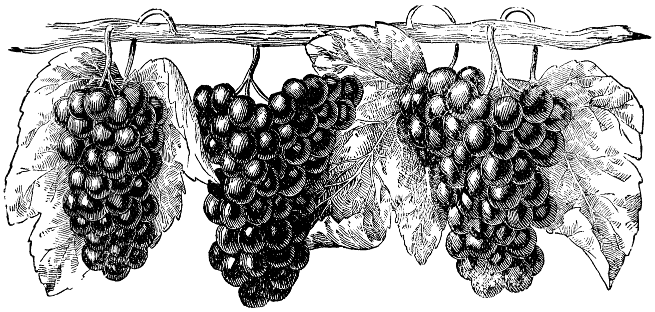
When he was a little boy, Elmer Swenson (1913-2004) picked up TV Munson’s book *Foundations of American Grape Culture* and a new grape breeder was made. Swenson worked on his grandfather’s farm in Osceola, WI, where he first dabbled in the vineyard, crossing old varieties with wild grapes. He focused on developing grapes that were high quality, disease resistant and very hardy to the cold winters of the Upper Midwest. He distributed his new grape cultivars to private growers and one nursery catalog. In the early 1970s, he brought a basket of his Swenson Red grapes to the University of Minnesota and they decided to formally introduce the cultivar. From that point on, Swenson worked at the U of Minn program, but most of his breeding still took place on the farm he eventually inherited from his grandfather.

During his 60-year career, Swenson crossed, tested and culled grapevines, a slow process that spread over many plant generations and required intense patience and skilled observation. He was very generous with his knowledge and was known to send grape cuttings to anyone who requested them. Thanks to Swenson, we have hundreds of cold-hardy grape cultivars, far too many to list here. Among the most popular of these is the Somerset Seedless **(381A)**, a Fedco favorite every year.



Growing Grapes on an Arbor

Train one or more vines onto an arbor or gazebo; we have 8 vines, spaced about 10' apart. Prune each vine back to a single trunk. Encourage several permanent arms from each trunk. Every winter remove 70-90% of the past summer’s growth. Next summer new fruiting canes will grow off the permanent arms.



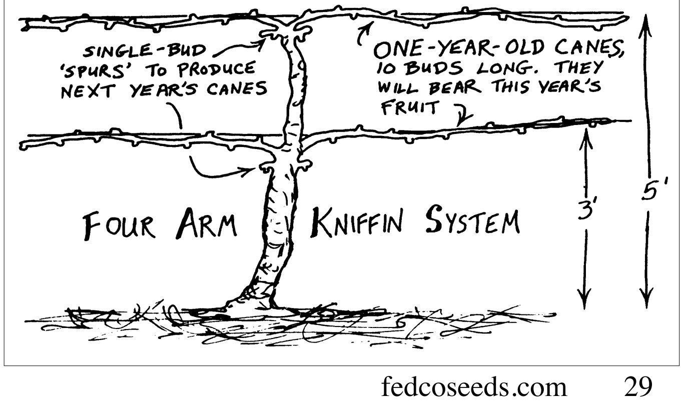
Pruning Grapes in the Four-Arm Kniffin System

First year: After the danger of frost has passed, cut newly planted vines back to a single stem, 6" long with two to three buds.

Second year: Set up two wires, 3' and 5' high, stretched between posts. Cut plant back to a single stem, 6 feet long and tie it to the top wire. Leave 4–6 buds near each wire and remove others.

Third year: Select 8 canes, 4 for each wire, and remove the rest. Tie two canes to each wire, one in each direction. Cut these 4 canes back to 10 buds each. Cut the remaining 4 canes back to 1–2 buds each.

Later years: In the spring, remove last year’s fruiting canes. Select eight new canes. Cut 4 of them to 10 buds each, and tie them to your wires. Cut the remaining 4 back to 2 buds each. These will produce next year’s fruiting canes. Remove all other canes. The number of buds left on the fruiting canes may be adjusted to encourage more fruit (leave more buds) or larger size (leave fewer buds).


SINGLE-BUD 'SPURS' TO PRODUCE NEXT YEAR'S CANES
ONE-YEAR-OLD CANES, 10 BUDS LONG. THEY WILL BEAR THIS YEAR'S FRUIT
FOUR ARM KNIFFIN SYSTEM
3'
5'

Hardy Vines and Creepers

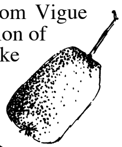
Hardy Kiwis

Hardy Kiwis *Actinidia* spp. Productive twining vine climbs 20' or more and produces juicy bite-sized fruits in late summer. Though much smaller than the fuzzy supermarket kiwi, hardy kiwis are by no means lacking in flavor. Skin is smooth and edible. The longer they ripen on the vine, the sweeter they become. Easy to grow in rich well-drained soils. Will begin producing in 5–9 years. Mature plants may produce up to 100 lbs of fruit. Once vines are established, adequate pruning (see directions in sidebar) will significantly increase yields. No significant pest or disease problems.

Both male and female plants required for fruit. One male will usually pollinate at least three females of the same species. The females bear the fruit. We offer two species. *Arguta* ripens around mid-September, has larger fruit and is more vigorous than *kolomikta*. (*Argutas* can just about pull down a tree.) *Kolomikta* ripens around mid-August, has smaller fruit and is less vigorous but more cold-hardy than *arguta* and should thrive even in the northernmost districts. Native to eastern Asia. (well-rooted transplants)

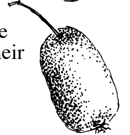
***A. arguta* 'Chang Bai Mountain' Female.** New vigorous hardy seedling of cultivar Qui from the Changbai Mountain region bordering North Korea and China. Firm green oblate fruits the size of quarters are distinct in shape and more rounded than other *argutas*. Sweet flavor with little acidity. Highly productive. Z4.

387A Chang Bai Mountain Female Kiwi, $14.50



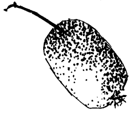
***A. a.* 'Michigan State' Female.** Michigan State University. Tom Vigue calls them "sweet and most highly luscious." A dynamic combination of sweet and sour. Although these lime-green tots may sometimes make you pucker up, the overall experience is joyous and delicious. Larger than other varieties. Z4.

388A Michigan State Female Kiwi, $14.50



***A. a.* 'Meader'** Fruitless **male** kiwi suitable for pollinating *arguta* females Chang Bai and Michigan State. Will not pollinate *kolomiktas*. Extremely vigorous vines are often grown just for their beautiful dark green ornamental foliage accentuated by reddish-pink petioles (leaf stalks). Z4.

389A Meader Male Kiwi, $14.50



***A. kolomikta* 'Red Beauty' Female.** Fruit is sweet and small, the size of a large grape. Medium-dark green foliage becomes showy red in autumn. Requires Arctic Beauty for pollination. Z3/4.

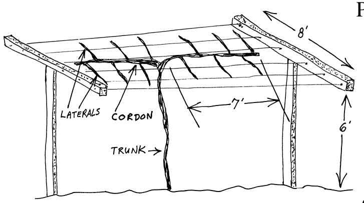
390A Red Beauty Female Kiwi, $14.50

***A. k.* 'Arctic Beauty'** Fruitless **male** pollinator for Red Beauty. Will not pollinate *argutas*. Often grown by itself as an ornamental for its beautiful foliage. Young leaves emerge purple, then become variegated pink, white and green, looking as though they've been dipped in paint. Heat, excessive fertilization or shade may reduce the leaf color. Z3/4. **ME Grown.**

391A Arctic Beauty Male Kiwi, $14.50

Kiwis

Kiwis are dioecious vines, meaning male and female flowers are on separate plants, so you must plant a male plant to pollinate the fruiting female plants. They are extremely vigorous and require a rugged trellis or arbor and heavy pruning. Plant vines 15' apart each way in moist but well-drained soil. Kiwis are adaptable and tolerate a wide range of soil types (pH 5.0–6.5). One male will pollinate several females as long as they are within approximately 30' of the male. Although the vines are quite hardy, the flowers and foliage are frost sensitive. Planting on a northern exposure will delay budding in spring and reduce risk of frost damage. Protection from winter winds and intense winter sun is also recommended. Mulch with hay or wood chips. On poor soil fertilize with compost annually.



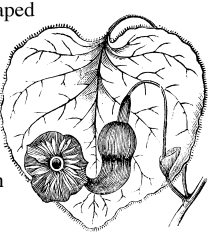
On a trellis: Train a single trunk to the trellis wires and then train two permanent 7–10' cordons (arms) off the trunk. Each winter remove at least 70% of old growth, leaving a dozen or so one-year-old laterals. Fruit will develop on fruit spurs growing off these one-year-old canes.

On an arbor or gazebo: Once established, prune 70% of the old growth each year and leave some new canes for this year's fruiting.

Summer pruning may be required to keep extremely rampant vines from choking out your farm. *The Pruning Book* by Lee Reich is an excellent reference for pruning kiwis.

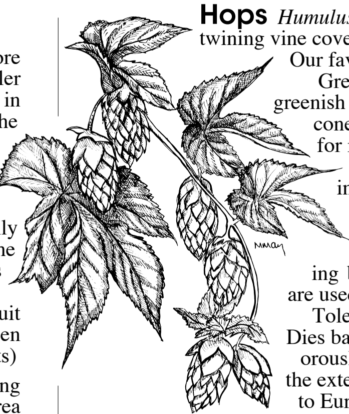
Aristolochia durior Dutchman's Pipe

***Aristolochia durior* Dutchman's Pipe** 20-30' Also called **Pipe Vine**. Vigorous climber with large wonderful 4–10" heart-shaped dark green leaves. Once established, it will cover the porch, trellis or gazebo every summer. Beware though—one vine can peel the shingles right off the side of your house! Provides all the privacy you ever wanted even if you live right in town. Inconspicuous U-shaped tubular white and mahogany flowers in clusters of 1–3 look like wee Dutchman's pipes. Sun or shade. Thrives in shade. Likes well-drained soil with adequate moisture. Native to eastern U.S. Z4. (well-rooted transplants)



395A Dutchman's Pipe, $16.25

Hops



Hops *Humulus lupulus* Late summer. Up to 20-30' Beautiful twining vine covers a trellis, archway or the entire side of a barn. Our favorite live awning to shade out the summer sun. Green lobed leaves, bristly stems, and insignificant greenish flowers, followed by the hops: papery aromatic cone-like strobiles used medicinally and in brewing for more than 1000 years. John Christopher recommends the strobile tea as "a powerful, stimulating and relaxing nerve tonic." For brewing, there are basically two types of hops. Aroma hops have a lower percentage of alpha acids and are used for flavoring, finishing or conditioning brews. Bitter hops have more alpha acids and are used to impart bitterness.

Tolerates shade, adapted to most well-drained soils. Dies back to the ground in fall and rebounds more vigorously each year. Plant it where you want it because the extensive root system can be hard to dig up. Native to Eurasia. Z3. (5-6" female rhizomes)

***H. l.* 'Cascade'** USDA 19124 [(Fuggle x Serebrianka-Fuggle S) x open pollinated] Oregon St U, 1972. Contains 4–7% alpha acids. Fragrantly aromatic hop, low bittering value. Very productive with large cones, ready to harvest mid-late August in central Maine. A customer wrote, "Cascade has gained impeccable renown as *the* charismatic hop in such unsurpassable ales as Anchor's Liberty Ale, Sierra Nevada's Pale Ale and McNeill's Firehouse Amber Ale. Nothing 'light' about these." Resistant to downy mildew.

L396A Cascade Hops, bundle of 3, $17.50

***H. l.* 'Centennial'** Brewers Gold x USDA male. Zimmerman, Kenny intro, 1990. Floral citrus aroma gives a nice balance to this dual-purpose hop. High yielding with 8–11% alpha acid content. A common favorite among American craft brewers for IPAs, ales and porters. Sometimes referred to as Super Cascade due to similarity in flavor to Cascade but with higher bittering content. Moderately resistant to powdery mildew.

L397A Centennial Hops, bundle of 3, $17.50

***H. l.* 'Magnum'** Galena x select German male. German Hallertauer hybrid, 1980. Very high bittering with good storability. Alpha content 12–17%. Strong bitter flavor with subtle hints of spice and citrus though not generally used as an aroma hop. Known for giving a clear and distinct bitterness that is not overpowering. Used in IPAs, pale ales, stouts and lagers.

L398A Magnum Hops, bundle of 3, $17.50

Hops

Refrigerate slightly moistened rhizomes in a plastic bag until planting. Hops prefer full sun and rich light well-drained soil with a pH of 6.5–8.0. As soon as soil can be worked in spring, till to create a weed-free area. Dig holes about 1' deep and at least 3' apart in rows. Add manure, compost and other slow-release organic fertilizers. Plant 2 rhizomes per hole, horizontally with the buds pointed up and cover with 1–2" of loose soil. The first year the hop plant requires frequent light watering and mulching.

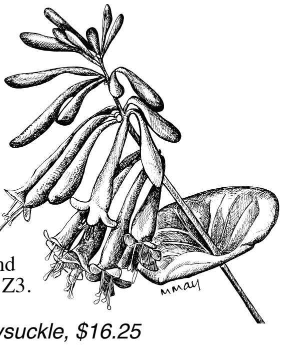
Hops grow vertically, with lateral sidearms extending from the main vine and producing cones. Vines may grow up to 25' in a single season, and do best if they are trained onto strong twine 12–30' high, supported by a trellis, wire, pole, tree branch or south-facing building.

When the young vines are about 1' long, select the 2 or 3 most vigorous vines per hill and remove the rest. Gently wrap the vines clockwise onto a string. Once trained, the vine will guide itself.

Pick the hops when they are papery but still slightly sticky and filled with yellow powder. Harvest dates will vary with the variety and climate. Because most hops are produced out of reach from the ground, it is safest to lower the vines in order to pick the hops. Dry hops thoroughly before use. Spread on screens in a dry attic, they will dry in a few weeks. Dried hops freeze well.

Cut the vines back to the ground after they have been killed by frost. Each spring apply a hearty topdressing of manure and compost. To help control vigor, prune roots by cutting a 2–3' circle with a shovel around the base of the plant in spring.

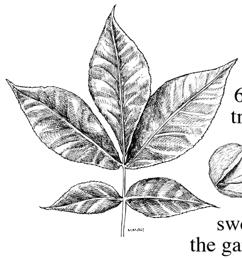
Lonicera x *brownii* 'Dropmore Scarlet' Honeysuckle



10-20' (*L. sempervirens* x *L. hirsuta*) Tall climbing honeysuckle developed by FL Skinner in Manitoba. Jazzy whimsical clusters of $1^{1}/_{2}$" scarlet-orange tubular flowers bloom profusely and tirelessly from early summer into late fall. Attracts hummingbirds and butterflies. Striking blue-green foliage on red stems. Great for fence or arbor. Easy to grow, not invasive, generally free of insects and diseases. Flowers the first year. Considered one of the hardiest vining honeysuckles. Likes average well-drained soil and full sun. Species native to North America. Z3. (well-rooted transplants)

399A Dropmore Scarlet Honeysuckle, $16.25

Nuts



***Carya ovata* Shagbark Hickory Seedlings** 60-80' or taller. One of our most beautiful native nut trees. Straight trunked and draped with branches that curve skyward at the tips. Not only does the bark shag, it looks as though huge long strips are about to fall off. After the tree reaches bearing age, about 40 years, it will shower the yard with sweet edible nuts. Those left unharvested germinate in the gardens, planted by local creatures, some four legged, some two. Rich yellow fall foliage. Slow growing but very long-lived. Tough wood used for making tool handles. Prefers rich well-drained loam but adaptable. **Self-pollinating**. Native to eastern U.S. Z4. (1-3')

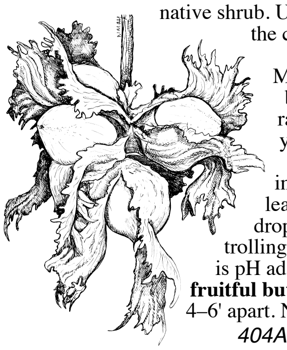
402A Shagbark Hickory, $16.50

***Castanea dentata* American Chestnut Seedlings** Up to 100' Before 1900 American chestnut was one of the most important deciduous trees in the eastern U.S. The arrow-straight rot-resistant wood was used for everything from mine timbers to musical instruments. Delicious sweet nuts were an important food for wildlife and humans. The Asian fungus *Cryphonectria parasitica* (chestnut blight) was discovered in Brooklyn in 1904; within 50 years it killed virtually every chestnut tree in the eastern U.S. The blight does not kill the roots however, and rare isolated stands of mature trees can still be found. In July 2015, the tallest American Chestnut in North America was discovered right here in Maine by researchers who spotted the profuse white blossoms from the air.

The trees we're offering are not immune to blight but were harvested from healthy trees and will likely thrive if there is no active blight infection nearby. Fast growing and straight trunked with a wide-branching magnificent rounded crown. Fragrant white blooms in July. Ribbed sharp-toothed lustrous dark green foliage. Yellow fall color. Prefers loamy well-drained acidic soil and full sun. **Two or more needed for pollination** but will cross-pollinate with Asian and European chestnuts. Precocious, bearing heavy crops of nuts in 10 years. From each American chestnut purchase, Fedco will donate $3 to support the work of the American Chestnut Foundation Maine Chapter. Z4. **ME Grown.** (1-3')

403A American Chestnut, $22.50

***Corylus americana* American Hazelnut Seedlings** 12-18' x 10-15' Also called **American Filbert**. Squirrels, bluejays and humans alike relish the sweet tasty $^{1}/_{2}$" nuts of this multi-stemmed rounded native shrub. Usually bears 3–5 years after planting. Collect the crop as soon as the husks begin to turn brown and lose their sticky yellowness. In central Maine that's around the third week of September. Showy catkins in spring. Dark green serrated foliage in summer. A patchwork of reds, yellows, oranges and greens in autumn. Suckers from the roots. Excellent for naturalizing in thickets. The main pest is nut weevil, which leaves a "hit" mark on the nut shell. (Raking up drops and spraying Surround may help with controlling this problem.) Prefers well-drained soils and is pH adaptable. Full sun or light shade. **May be self-fruitful but** for best nut sets, plant more than one shrub, 4–6' apart. Native to the U.S. Z4. **ME Grown.** (1-3')



404A American Hazelnut, $16.50

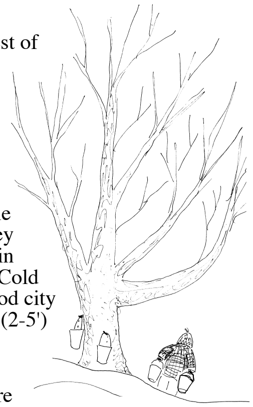
***C.* Experimental Hybrid Hazel** Badgersett Research Farm, Canton, MN. Seedling shrubs produced from crosses of three hazelnut species: American hazelnut, *C. americana*; beaked hazelnut, *C. cornuta*; European hazelnut, *C. avellana*. The nuts from these shrubs will likely be larger than those from other seedlings because they are crossed with the larger Europeans (the kind you can buy at the store). Highly resistant or immune to filbert blight. We have them in a long-term trial in central Maine. So far, so good—the first nuts are tasty and the bushes thriving. **ME Grown.** (1-3')

405A Experimental Hybrid Hazel, $20.00

***Juglans nigra* Black Walnut Seedlings** 70-90' A spectacular shade tree with a magnificent open rounded crown of massive limbs with dark green leaves. Harder to crack than commercial English walnuts but worth the effort for their extraordinarily distinct sweet earthy rich flavor. Eat them chopped on fresh salads, or with dark chocolate while sipping bourbon. Highly valued cabinet and veneer wood. Husks, leaves and roots commonly used in herbal medicine for anti-fungal properties. Husks also yield a rich brown dye. Deep taproot. Prefers moist well-drained soils, pH 6–7. Roots give off a compound called juglone that inhibits competing plants, so don't plant one too close to your garden. Space trees about 50' apart for nut production, 20' apart for lumber. May begin to bear fruit in 5–10 years. Some say multiple trees needed for **pollination** but we've seen enough solo trees with large nut crops to say that you only need one. Native to eastern U.S. though not quite into Maine. Z4. **ME Grown.** (1-3')

406A Black Walnut, $17.00

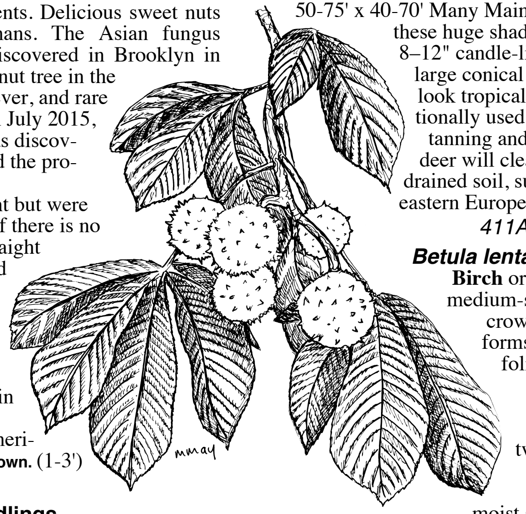
Shade Trees



***Acer saccharum* Sugar Maple** 50-100' Largest of our native maples, also known as **Rock Maple**, valued for shade, syrup and lumber. A New England tradition was to plant a pair of sugar maples in front of the farmhouse on the inhabitants' wedding day. Those "wedding trees" still grace many Maine front yards. Famous for its yellow, gold, scarlet and crimson fall foliage and its fresh sap that's boiled down to make real maple syrup. Huge upright spreading form with light grey bark. Shade tolerant, making it easy to interplant in existing woods. Prefers moist well-drained soils. Cold hardy. Sensitive to salt and air pollution; not a good city tree. Native Quebec to Gulf Coast. Z3. **ME Grown.** (2-5')

410A Sugar Maple, $18.00

***Aesculus hippocastanum* Horse Chestnut** 50-75' x 40-70' Many Maine dooryards still feature these huge shade trees with their magnificent white 8–12" candle-like flower clusters standing erect and covering the large conical tree in late spring. Distinctive five-palmate leaves look tropical and are a rich dark matte blue-green. Wood traditionally used in charcoal production; bark in medicines, leather tanning and fabric dying; seeds in bookbinding. Squirrels and deer will clean up any seeds you don't use. Prefers moist well-drained soil, sun or partial shade. Tolerates salt. Native to southeastern Europe. Z3. **ME Grown.** (1-3')



411A Horse Chestnut, $16.75

***Betula lenta* Sweet Birch** 40-80' x 35-45' Also called **Black Birch** or **Cherry Birch**. Graceful horizontal branches on a medium-sized tree with a rounded irregular wide-spreading crown. Glistening smooth reddish-brown to black bark forms scaly plates on mature trees. Lustrous dark green foliage turns splendid golden-yellow in fall. The best birch for birch beer, brewed from its copious sap. Once the main source of oil of wintergreen. Chew the dormant twigs, or brew a delicious tea from twigs and leaves. Also valued as beautiful furniture wood. Pendulous 3–4" catkins dangle from the shiny bronze branches in spring. Prefers deep rich moist slightly acid well-drained soils, but adapts to most conditions except heavy clay. Sun to part shade. Native to eastern U.S. Z3. **ME Grown.** (1-3')

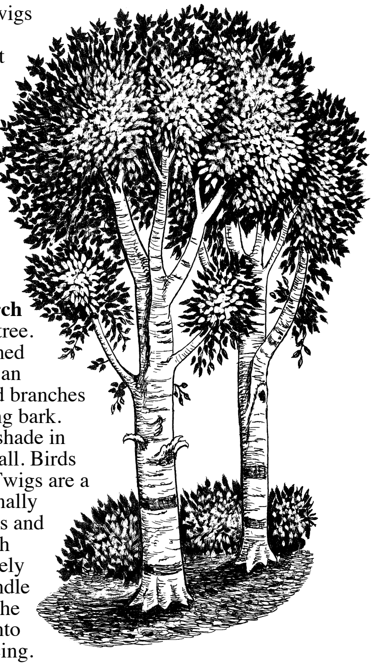
412A Sweet Birch, $16.75

***B. nigra* River Birch** 60-80' x 40-60' With its graceful silhouette and attractive bark, river birch is a highly prized ornamental. Grows to be a very large rounded tree. Found along stream banks and riparian areas where conditions are wet in winter and spring, dry in summer and fall. Dark green summer foliage yellows before dropping. The beautiful reddish-brown exfoliating bark reveals the equally ornamental multi-shaded inner bark. Leaves, twigs and bark traditionally used to treat various stomach ailments. Birds eat the seeds and deer browse the foliage. Wood not as valuable as other birch. Prefers moist acid soil. Fast growing, trouble free. Native to eastern U.S. Z4. **ME Grown.** (1-3')

413A River Birch, $16.75

413B River Birch, bundle of 5, $70.00

***B. papyrifera* Paper Birch** 30-70' x 30' Also called **Canoe Birch** or **White Birch**. The classic birch tree. Elegant as a single- or multi-stemmed specimen. Medium-sized tree with an irregular oval shape, upright angled branches and magnificent chalk-white peeling bark. Deep green foliage produces light shade in summer and turns clear yellow in fall. Birds prize the catkins, buds and seeds. Twigs are a favorite deer browse. Bark traditionally used for building canoes, containers and roofing. When traveling in the north country, keep a small bundle of finely shredded bark in your pocket to kindle the nightly fire. Valuable wood at the sawmill. Twiggy branches, stuck into the ground, are perfect for pea fencing. Prefers moist well-drained acid soil though we've seen it thrive on ledge. Native to northern North America. Z3. **ME Grown.** (1-3')



414A Paper Birch, $16.75

More Shade Trees

***Ginkgo biloba* Ginkgo** 50-80' Also called **Maidenhair Tree**. Considered the oldest living genus of seed plants; grew in North America in the time of the dinosaurs. There are 3000-year-old specimens in China. Upright tree when young with branches that spike out and up like the rays of the sun, eventually becoming wide-spreading and graceful. Slow-growing, can be extremely long-lived. Unique fan-shaped foliage turns sparkling golden-yellow in fall, then all at once the leaves drop and within hours the tree is bare. Famous for their edible seeds enclosed in infamously stinky fruit. The flesh will actually rot off all on its own, leaving clean edible nuts with no bad smell. The softish nuts can be used in stir-fries. Leaf tea used to enhance circulation to the brain and extremities. Tolerates smoke, dust, wind, ice, insects, disease, salt. Prefers slightly acid well-drained soil, very adaptable, full sun to partial shade. Minimal maintenance requirements, nearly indestructible, an excellent city tree. Male and female tree required for fruit. These are unsexed seedlings. **Plant two or more to increase the chance of fruit.** Native to southeastern China. Z3. **ME Grown.** (1-3')

416A Ginkgo, $17.00

416B Ginkgo, bundle of 5, $75.00

***Gleditsia triacanthos* Honeylocust** 50' x 30-35' Beautiful fast-growing pyramidal leguminous nitrogen-fixing tree. Bright green lacy leaves provide filtered light, making it good for “two-story” agriculture or great shade for the lawn. Subtle greenish-white flowers turn to sugary pods suitable for cattle or pig forage or even ethanol. Traditionally pods were dried, ground and used in flour. Good for erosion control and often used as a street tree. Plant in full sun, well-drained soil. Tolerates drought, pollution, salt, disease and insects. May have thorns. Native to eastern U.S. Z4. **ME Grown.** (2-4')

418A Honeylocust, $16.00

***Ostrya virginiana* Eastern Hophornbeam** 20-40' x 15-20' Also called **Ironwood** and **Hardhack**. Not to be confused with *Carpinus caroliniana*, Musclewood, which is frequently referred to as hornbeam. An important small native upland understory tree that is tougher than nails. Called Ironwood because it was traditionally used for sled runners, wagon tongues (the part that hitched to the horses), longbows, and other rugged tools. We use it for ax handles. Moderately shaggy greyish-brown bark and birch-like leaves. In fall, the seeds mature in little papery cones resembling hops, providing food for winter birds like the chickadee. Prefers well-drained acidic soil. Full sun or partial shade. Can be drought tolerant and thrive on thin gravelly soil, but water well for the first few years while it gets established. Tolerant of pollution and works well in yards and as a street tree. Native Nova Scotia to most of eastern U.S. Z3. **ME Grown.** (1-3')

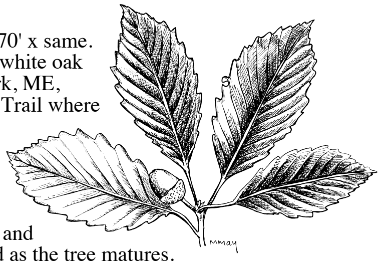
419A Eastern Hophornbeam, $16.75

***Quercus alba* White Oak** 60-80' with same spread. Spectacular broad irregularly rounded oak with low-lying branches that stretch out horizontally from the trunk, sometimes as far as 50'. Some extremely fine specimens in Maine grow on Swan Island in the Kennebec River right off Richmond. Bark is finely grooved and etched. Wood is valued for lumber and firewood. Once common along the Maine coast, it was almost entirely stripped for boat-building lumber more than a century ago. Soil adaptable though it prefers deep moist well-drained acid conditions. Thrives in locations where fallen leaves can be left around the base; avoid soil compaction, even foot traffic. Disease and insect resistant, drought tolerant. Slow growing and extremely long-lived. Native to eastern U.S. Z3. **ME Grown.** (1-3')

420A White Oak, $17.00

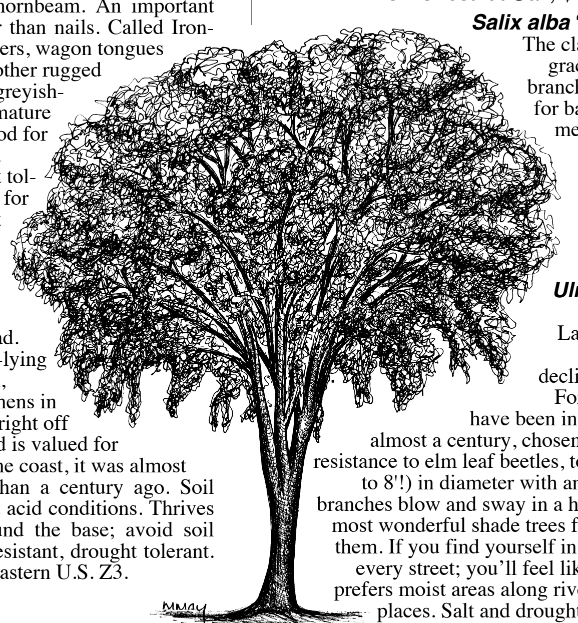
***Q. macrocarpa* Bur Oak** 70-80' x same. Hardiest of the white oaks with a deeply grooved massive trunk and a wide-spreading crown of huge branches. Small branches are distinctively corky, winged and tend to twist and kink. The habit is upright and somewhat vase shaped. Lustrous dark green foliage and large 1–2" acorns, each almost entirely enclosed in a fringed cup. These are edible and low in tannic acid; when roasted they supposedly make a decent coffee substitute. (For detailed instructions on acorn processing, see Samuel Thayer’s *Nature’s Garden*.) The strongly astringent inner bark, foliage and acorn caps are all medicinal. The most urban-tolerant oak. Fairly fast growing. Needs full sun but adaptable to a wide range of soil types including clay. Monoecious, so you need only one to get fruit. Native to eastern U.S. and Canada. Z3. **ME Grown.** (1-3')

422A Bur Oak, $17.00



***Q. montana* Chestnut Oak** 50-70' x same. Also called **Rock Oak**. Part of the white oak group. On Mt. Agamenticus in York, ME, there is a trail called Chestnut Oak Trail where you can find some tall native specimens. Dark yellow-green lustrous leaves with scalloped edges and soft fuzzy undersides resemble chestnut leaves in shape. Bark on young trees is grey-brown and smooth, becoming deeply furrowed as the tree matures. Acorns are important browse for deer, squirrels and other wildlife. The wood is used for the same purposes as white oak though offered commercially only in areas of abundance. Low maintenance and long-lived, makes a lovely specimen in the landscape. Prefers full sun and rich moist well-drained loam, but adaptable to rocky dry areas. Native ME to IN and south. Z4. **ME Grown.** (1-3')

423A Chestnut Oak, $17.00



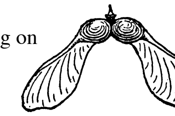
***Salix alba* ‘Tristis’ Niobe Weeping Willow** 50x50' The classic weeping willow, a very large majestic graceful wide-spreading tree. Golden drooping branches, which can hang to the ground, are used for basket weaving; golden bark and leaves used medicinally. Harvest twiggy branches in early spring to make a tincture. Buzzes with life when May flowers attract loads of pollinating bees. Native to southern Europe and western Asia. Z4. **ME Grown.** (1-3') (More willows on page 48.)

424A Niobe Weeping Willow, $14.00

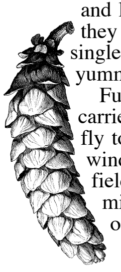
***Ulmus americana* ‘Princeton’ American Elm** 60x70' Princeton Nursery intro, 1922. Large fast-growing graceful native once lined virtually every street in New England but declined dramatically due to Dutch elm disease. Fortunately, several disease-resistant cultivars have been introduced. This one has been in the trade for almost a century, chosen for its high resistance to the disease. Good resistance to elm leaf beetles, too. At maturity the trunk can be 4' (even up to 8'!) in diameter with an immense vase-shaped canopy. Long loose branches blow and sway in a hazy breeze on hot summer days. One of the most wonderful shade trees for northern climates. We’re infatuated with them. If you find yourself in Castine, ME, visit the huge old elms lining every street; you’ll feel like you stepped back in time. Soil adaptable, prefers moist areas along rivers and streams but also grows well in drier places. Salt and drought tolerant. Plant more elms! Z4. (3-6')

426A Princeton American Elm, $29.00

Winged Seeds: High Flying Reproduction



Maples Paired fruit keys in clusters or chains, depending on variety, separate at ripeness and rain down on the landscape when the wind picks up. **Sugar Maples** flower in April and if you plop yourself down in the sugarbush in early October you’ll experience a wild winged seed celebration with breathtaking aerial displays as the seeds spiral down upon the earth.

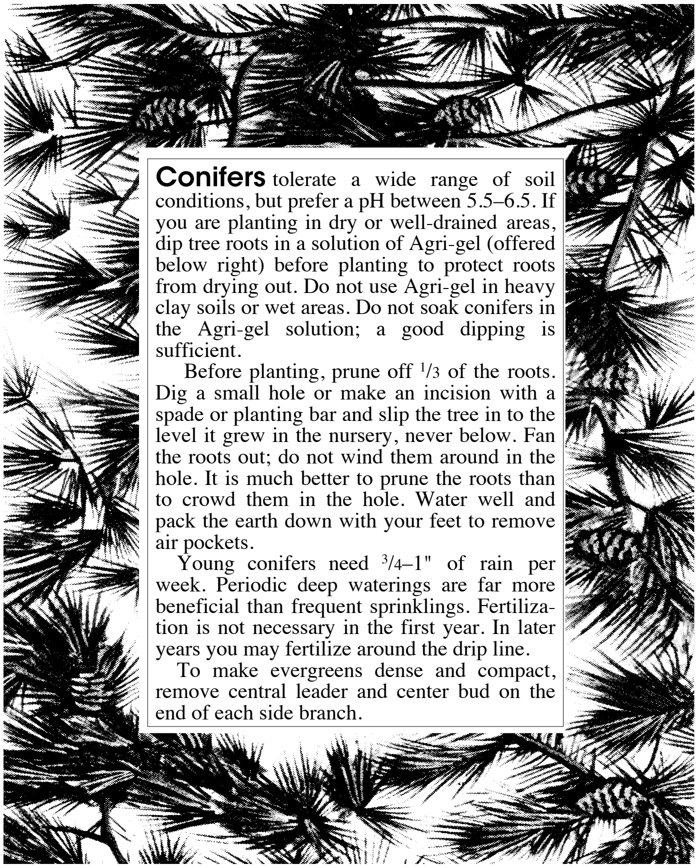


Pine trees In late July, clusters of glistening sticky pine cones dangle from the branch ends of our beloved white pine trees. As the summer sun warms them, sap drips from the tips of each cone. They hang there always out of reach, teasing me. Eventually the wind picks up and some of these gorgeous green gems break free and land on the forest floor or floating in the lake. Right after they fall, they are still succulent and moist enough for human use. I like to slice a single green cone lengthwise and drop it into mushroom-barley soup for yummy forest flavor! Simmer it for 15 min. and remove before serving.

Fully mature cones gradually open and shed their seeds. Each seed carries off a broken piece of the cone that acts like wing helping the seed fly to its new home. **White pines** typically let loose in late August. By wind, seeds can travel 200' within a heavy stand of trees, 700' in an open field, and even farther along the water’s edge where they float for miles. Other seeds are scooped up and cached by mice, voles and other furry mammals, who often never return to eat them.

How does all this pollination stuff work, anyway?

Self-pollinating, **self-fertile** and **self-fruitful** all mean the same thing. You can plant a self-fertile tree and expect it to pollinate itself and set fruit alone (for example, peaches, pie cherries, apricots). However, many self-fertile trees’ fruit sets are enhanced with multiple plantings (elderberries and Amelanchiers). **Self-sterile** or **self-infertile** means that another tree of a different cultivar or variety is needed to set fruit (cross-pollinate). This is the case with most apples. **Monoecious** (from Greek meaning ‘one household’) plants have their female and male parts on separate flowers both together on the same plant. In most cases, these plants are self-fertile, but not always! (Black walnuts are monoecious but the male flower releases pollen before the female flowers open, so having two plants is better than one). **Dioecious** (‘two households’) plants have either all male or all female flowers on separate individuals. You would need to plant one female and one male to achieve pollination. When you buy unsexed seedlings, you generally have a 50-50 chance of getting one gender or the other (ginkgo, spicebush, bayberry, persimmon). **Bisexual** or **perfect** flowers contain both male and female components within the same flower. Some plants with perfect flowers will be self-fertile, some will not. Often, specific cultivars or varieties have perfect flowers but they cannot pollinate themselves and need other varieties to assist them (apples and blueberries).



Conifers tolerate a wide range of soil conditions, but prefer a pH between 5.5–6.5. If you are planting in dry or well-drained areas, dip tree roots in a solution of Agri-gel (offered below right) before planting to protect roots from drying out. Do not use Agri-gel in heavy clay soils or wet areas. Do not soak conifers in the Agri-gel solution; a good dipping is sufficient.

Before planting, prune off 1/3 of the roots. Dig a small hole or make an incision with a spade or planting bar and slip the tree in to the level it grew in the nursery, never below. Fan the roots out; do not wind them around in the hole. It is much better to prune the roots than to crowd them in the hole. Water well and pack the earth down with your feet to remove air pockets.

Young conifers need 3/4–1" of rain per week. Periodic deep waterings are far more beneficial than frequent sprinklings. Fertilization is not necessary in the first year. In later years you may fertilize around the drip line.

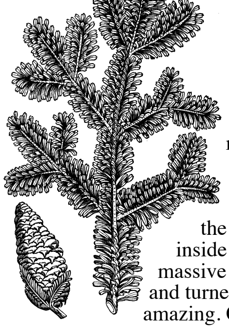
To make evergreens dense and compact, remove central leader and center bud on the end of each side branch.

***Abies balsamea* Balsam Fir** 45-75' One of the most abundant of our native conifers. Twigs, inner bark, needles and sap are all medicinal. Small "blisters" contain a transparent aromatic resin that has been traditionally used as an inhalant for headaches and congestion, and as a salve for cuts and arthritis. Needle tea is rich in vitamin C. The fragrant boughs are a favorite for wreaths; the needles used in scented pillows and potpourri. The best of all conifers for a Christmas tree! Narrow, conical, smooth-barked. Prefers well-drained moist acid soil. Avoid polluted areas. Semi-shade tolerant, slow-growing. Good hedge or specimen tree, songbird nesting area or rabbit thicket. Native from Labrador to upper eastern U.S. Z3. (9-18")

430A Balsam Fir, bundle of 5, $19.00

***Metasequoia glyptostroboides* Dawn Redwood** 100' One of the most spectacular of the ornamental trees. The wide irregular trunk looks like something out of a fairy tale with its iridescent golden-orange bark that becomes deeply grooved, hollowed and fluted with age. The bright green deciduous needles turn orange in the fall. Grows quickly, up to 50' in 15–20 years, with many small-diameter horizontal branches and a uniform conical habit. Give it lots of space to grow! Highly adaptable, easy to transplant. Prefers moist deep well-drained slightly acid soil in full sun. Will tolerate wet or dry sites. Pollution resistant; good specimen or street tree, rarely needs pruning. Fossils dating back 50 million years have been found in Japan. Thought to be extinct until it was "rediscovered" in central China in 1941. Resembles California redwoods only vaguely. Native to China and Japan. Z4. **ME Grown.** (1-3')

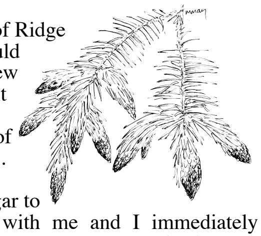
431A Dawn Redwood, $16.00



***Picea abies* Norway Spruce** 80' Fast-growing wide-spreading upright picturesque tree with graceful long pendulous branches that often reach the ground. Largest of the spruces. If you go to the Mt. Auburn Cemetery in Cambridge, MA, don't miss the ancient Norway Spruce just inside the front gate. Several of its massive drooping branches have rooted and turned into secondary trunks. It is truly amazing. Orange-brown scaly bark. Excellent lumber. Showy 4–6" cones. Bright green foliage. Prefers loam but does better than other spruces in poorer soils. Native to northern Europe. Z2. (9-18")

432A Norway Spruce, bundle of 5, $19.00

Spruce Tip Cordial



Early this June, Cari Balbo, friend and owner of Ridge Pond Herbals in Palermo, ME, asked if she could swing by and harvest spruce tips. The bright new growth was just popping and still had a little bit of the brown husk at the ends, the best time to harvest the zesty tips for food. All the species of spruce we're offering this year have edible tips.

I asked Cari what she uses them for and she gave a long list, everything from spruce tip sugar to pickles! She shared this refreshing cordial with me and I immediately begged for the recipe. Cari says, "It's a tasty way to capture the lemony deliciousness of spruce tips. This non-alcoholic recipe is similar to a traditional elderflower cordial recipe."

Bring 2 c. water to boil in a saucepan. Once boiling, take off heat and add 2 c. sugar, stirring to dissolve and leave to cool. With a vegetable peeler, remove the rind from one organic lemon and then slice the lemon very thinly. Add peel and slices, 2 scant tablespoons citric acid, and 4 oz. (or 2 heaping cups) of whole or roughly chopped spruce tips to cooled sugar syrup. Stir well. Cover with a towel and leave at room temperature for 1–2 days, stirring occasionally. Strain and store in the fridge for up to 2 weeks. To serve, add a splash of cordial to water (still or sparkling) or to your favorite cocktail recipe. Cheers!

For spruce tip sugar, just whiz tips and sugar in a blender and add to baked goods and desserts. Cari recommends it for shortbread.

***P. glauca* White Spruce** 60-90' x 10-20' Native conifer to boreal forests, subalpine regions and Acadian forests of North America ranging from Alaska to Newfoundland. Northernmost trees nearly reach the arctic and will withstand winter lows of –70°. Diameter of trunk reaches up to 2'. One of the best trees for wind blocks and privacy screens. Wood commonly used for lumber, pulp and paddles. Harvest bright green spruce tips in late May to early June and process into citrusy sugar, syrup, vinegar or cordials. High in vitamin C. Adaptable and tolerant to wind, drought and cold. Full sun. Z2-6. **ME Grown.** (9-18")

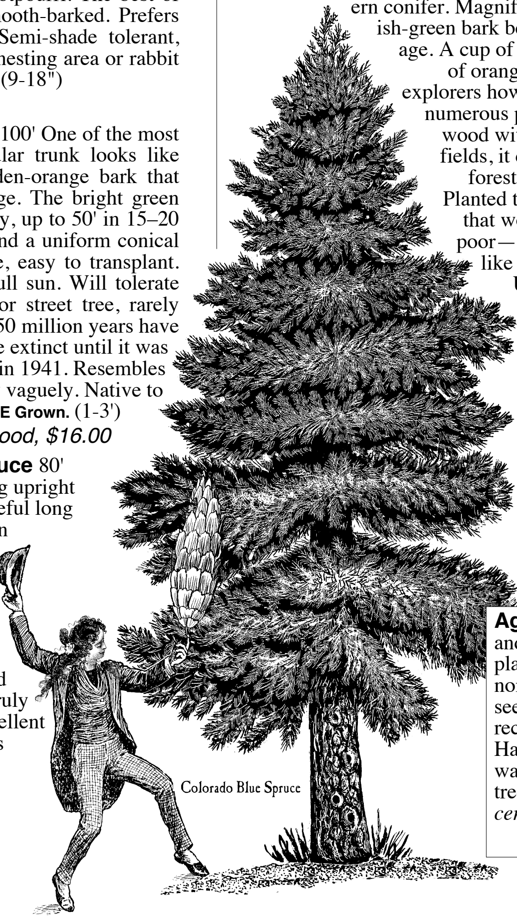
433A White Spruce, bundle of 5, $19.00

***P. pungens* var. *glauca* Colorado Blue Spruce** 30-60' Very popular specimen tree with truer blue foliage than other varieties. Can be used as a screen, as it is fast growing after 3'. There's a beautiful specimen on a lawn facing the Kennebec River near the Hinckley Bridge that owners have dubbed "Bruce the Spruce." So lovely you might want to name yours. Does not like wet soil. Extra spring nitrogen will improve blue color, which doesn't appear for first few years. Native to western U.S. Z2. (9-18")

434A Colorado Blue Spruce, bundle of 5, $19.00

***Pinus strobus* Eastern White Pine** 100' or more. The largest northeastern conifer. Magnificent and massive when mature. Smooth greyish-green bark becomes thick, rough and deeply furrowed with age. A cup of pine needle tea has more vitamin C than a cup of orange juice; Native Americans showed early white explorers how to brew it and stave off scurvy. The resin has numerous practical and medicinal applications. Excellent wood with a thousand uses. When grown in abandoned fields, it develops huge curving branches. Grown in the forest it will typically be "clear" for the first 30–80'. Planted thickly and sheared, it makes a beautiful hedge that won't drop its lower branches. Likes ordinary to poor—even sandy—soil. Shade tolerant, but does not like salt or roadsides. Fast growing. Native eastern U.S. Z3. **ME Grown.** (9-18")

435A Eastern White Pine, bundle of 5, $19.00



Colorado Blue Spruce

Plant Sizes

All of our woody plants are well-rooted bare-root plants. Some shrubs may be a bit shorter than the specs given, and some hardwoods may be much taller. Because of the nature of living plants, size variations will naturally occur within each crop.

Agri-gel A hydrogel formulation that absorbs and holds water. The swollen crystals adhere to plant roots, reducing transplant shock. Safe, nontoxic, easy to use. Useful for garden seedlings as well as woody plants. Highly recommended for raspberries and conifers. Half-ounce packet mixed with 1 to 3 gallons of water will treat up to 100 cane plants, or 50 trees and shrubs. *Not allowed for organic certification.* 1/2 oz.

L624A Agri-gel, $3.00

Ordering Instructions

Order online at fedcoseeds.com (click on Fedco Trees).

Or mail your order form to: **Fedco Trees, PO Box 520, Clinton, ME 04927**. Please use a current catalog.

- Use the 2018 order form; you may submit as many pages as you need: photocopies, forms downloaded from our website, or printouts mimicking our format.
- Keep a copy of your order for your records. To confirm receipt of your order, enclose a stamped self-addressed postcard.
- We do not take fax or phone orders.

Scionwood orders and early shipment of rootstock: Order online or use the order form on p. 37. More information on p. 16.

Volume discounts! if you order by January 19. Sorry, no volume discounts on later orders. Discounts apply only to orders either picked up or shipped to one address. Please see the order form for details.

Group Orders

- We accept group orders online. Group coordinators can click on Group Ordering on the Fedco Trees page for instructions.
- By mail, send us at one time all your members' order forms with one payment and receive the individually packaged orders at one address. The group total earns the discount, if any. Use an additional order form for a group cover sheet. Keep copies of group members' orders.

Payment

We accept check, money order, Visa, MasterCard, Discover, and AmEx; payment must accompany all orders. We request that mailed orders under $25 pay by check or MO. Make your check out to Fedco. We will charge your card when we receive your order. We will bill or refund you for any adjustments as each order is completed.

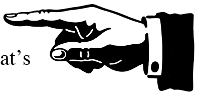
Sales Tax

Maine residents and pickup customers pay 5.5% on all goods purchased. Maine farmers: Please send us a copy of your farm exemption. Otherwise we must charge sales tax. There is no sales tax for orders shipped outside of Maine.

Handling Charges

We charge $10 for handling each time you adjust your order. Additions, deletions and cancellations are costly for us to process. You are welcome to place as many separate orders as you wish.

Sorry! You can't have that. Some states have restrictions on imported plants. Please check this list to make sure you're not trying to order something that's restricted in your area.



- We do not ship any plants **outside the U.S.**
- We cannot ship any plants to **Indiana** because of its Black Vine Weevil certification requirement.

AZ: *Carya* spp. Hickory; *Juglans* spp. Walnut
CA: *Carya* spp. Hickory; *Castanea* spp. Chestnut; *Juglans* spp. Walnut; *Pinus* spp. Pine; *Quercus* spp. Oak
CO: *Artemesia absinthium* Wormwood. Some counties prohibit *Prunus* spp. Cherry, Peach, Plum. Please check your county regulations.
CT: *Valerian officinalis*
FL: *Castanea* spp. Chestnut; *Cornus* spp.; *Quercus* spp. Oak
GA: *Vaccinium* spp. Blueberry, American Cranberry
ID: *Humulus lupulus* Hops; *Vitis* spp. Grape
KS: *Juglans* spp. Walnut
MI: *Abies* spp. Fir; *Vaccinium* spp. Blueberry, American Cranberry, Lingonberry
MT: *Pinus* spp. Pine
ND: *Artemesia absinthium* Wormwood
NJ: *Rosa* spp. Rose
NM: *Carya* spp. Hickory
NY: *Vitis* spp. Grape
OR: *Castanea* spp. Chestnut; *Corylus* spp. Hazelnut; *Humulus lupulus* Hops; *Vaccinium* spp. Blueberry, American Cranberry; *Vitis* spp. Grape
TX: *Carya* spp. Hickory; *Juglans* spp. Walnut
WA: *Artemesia absinthium* Wormwood; *Castanea* spp. Chestnut; *Corylus* spp. Hazelnut; *Humulus lupulus* Hops; *Tanecetum vulgare* Tansy; *Vaccinium* spp. Blueberry, American Cranberry, Lingonberry; *Vitis* spp. Grape

Plants in soil medium cannot be shipped to the following states: AK, AL, AR, AZ, CA, CO, HI, ID, KS, MS, MT, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA. **The following plants come in soil:** *Actinida* spp. Kiwi; *Alcea* Hollyhock; *Arctostaphylos uva-ursi* Bearberry; *Aquilegia canadensis* Wild Columbine; *Armeria maritima* Sea Thrift; *Calluna vulgaris* Heather; *Delphinium; Digitalis mertonensis* Strawberry Foxglove; *Gaultheria procumbens* Wintergreen; *Pulsatilla vulgaris* Pasque Flower; *Pulmonaria* Raspberry Splash; *Rubus* Nelson Blackberry; *Salix* spp. Willow; *Sempervivum* Hens & Chicks; *Symphyotrichum* New England Aster; *Vaccinium angustifolium* Lowbush Blueberry Sod; *V. corymbosum* Highbush Blueberry; *V. macrocarpon* American Cranberry; *V. vitis-idaea* Lingonberry

Deadlines

- **Volume discount deadline is January 19, 2018.**
- **Scionwood order deadline is February 16, 2018.**
- **Final order deadline** (except scionwood) **is March 9, 2018.**

Shipping

See the order forms for pricing details and volume discounts.

- We ship via UPS ground or USPS Priority Mail; our choice based on weight.
- We fill all orders on a first-come first-served basis.
- **Alaska** shipments go via USPS Priority Mail. Please include a postal address. This rate also applies to anyone in the Lower 48 who requires postal delivery.
- **Small & Light shipping** applies only to items with stock numbers beginning with **L**: perennials, bulbs, strawberries, rhubarb, hops, asparagus, scionwood, and more. If you order any other items in addition to these, you must pay the regular shipping charges.
- **Special Ship Dates:** If you require a specific ship date during our regular shipping time (3/30–4/13), we'll charge $15 to cover extra handling costs. *We no longer offer later shipping*.

When will my order arrive? We send an email with the UPS or USPS tracking number when it leaves our warehouse. If you're in New England, it may take one day to arrive. If you're outside New England, it may take several days.

- Scionwood and early rootstock orders ship **around March 12**.
- We ship everything else beginning **around March 30**, continuing until around April 13 according to planting zone.

Pickup

- **Pick up your order during our annual Tree Sale** at our warehouse at 213 Hinckley Rd. in Clinton, ME. Friday and Saturday, **April 27–28**, are reserved for preorder customers.
- The second Friday and Saturday, **May 4–5**, we are open to the public, and orders are still available for pickup.
- Tree Sale hours are **9:00–3:00 each day**.
- If you don't plan to shop at our Tree Sale, you can pick up your order at our warehouse on 4/24, 4/25 or 4/26 between 9:00–3:00. Less fun, but shorter lines.
- We will send you a pickup reminder and map in April.
- If you fail to pick up your order, we'll charge $15 handling plus cost of shipping to send you your order. Please don't make us do this.
- We will offer surplus for sale at the Tree Sale. Sometimes we have stock left over after the Tree Sale, but not after mid-May when we shut down completely and go home to plant.

Substitutions

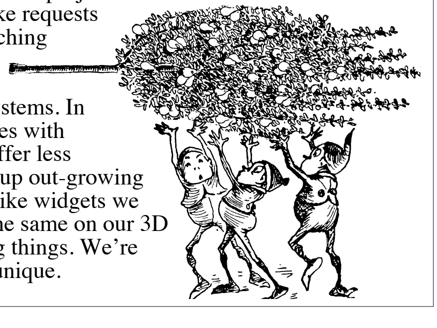
When dealing with live plants, we can never be certain that we can fill your order. If something becomes unavailable, our default mode is to substitute a similar variety because most people prefer a similar tree or plant to a refund. On the order form, if you indicate you don't want any substitutions, we'll send a refund. If you order apples, please indicate whether you will accept the varieties on similar rootstocks.

Out of Stocks

Some customers wonder why we don't contact them when something on their order is out of stock. We understand the inconvenience. Some of our stock arrives in November to be stored through the winter, but much more of it arrives in early spring just before—or even during—shipping. When we don't know about a shortage or crop failure until the last minute, it's impossible to contact customers. We do our best to please you, but we'll never be able to compete with the volume offered by big box stores and giant websites. However, we think you'll find we've got them all beat on quality and variety.

Plant sizes

Sizes listed for each item should be considered an average. The trees and shrubs in your order will sometimes be slightly larger and occasionally smaller than these projections. Unfortunately, we can't take requests for particular sizes or branching preferences. But fret not—you will receive healthy trees with excellent root systems. In our experience, smaller trees with well-proportioned roots suffer less transplant shock and wind up out-growing larger stock. If trees were like widgets we could stamp them all out the same on our 3D printer. But these are living things. We're glad every one of them is unique.



Fedco Trees 2018

PO Box 520 Clinton ME 04927

Order online
fedcoseeds.com
Check product availability.
Download catalogs and
additional order forms.

from mailing label CC-____________________

Ordered by:

Farm or Group Name ____________________

Name ____________________

US Mail ____________________

Town ____________________ St ______ Zip __________

Deliver to:

UPS (include your road name) ____________________

Town ____________________ St ______ Zip __________

Contact: phone ____________________ email ____________________

Delivery Options ✓ choose one:

☐ **Ship** in early to mid April.

☐ **Pickup** at Tree Sale in Clinton. Pay no shipping.

☐ **Pickup** in Clinton on 4/24, 4/25, or 4/26. Pay no shipping.
Sorry, no shopping on these days!

Substitutions (see p. 34)

	Yes	No
I will accept a similar variety.	☐	☐
I will accept similar rootstock.	☐	☐

* Fedco members qualify for a 1% discount on all purchases. See p. 70 for more information.

Volume Discounts
(only orders received by 1/19/18)

Subtotal over $200	take 10%
over $400	take 15%
over $1000	take 20%

Shipping Charges: (we ship by UPS or Priority Mail, our choice)

Continental United States	minimum	if your **Adjusted Total** is
	$22.50	over $150.00, pay 15% of adjusted total

Orders to **Alaska** go Priority Mail; be sure to give a *Postal Address*

	minimum	if your **Adjusted Total** is
Priority Mail	$25.00	over $125.00, pay 20% of adjusted total

Small & Light: All your stock numbers begin with **L**.

	minimum	if your **Adjusted Total** is
Small & Light	$10.00	over $67.00, pay 15% of adjusted total

Subtotal from reverse	
Volume Discount	–
* **1% Member Discount**, from Subtotal	–
Adjusted Total	=
ME residents & pickups add 5.5% **Tax**	+
Shipping	+
Total	=
Donate to MeHO Maine Heritage Orchard, see pg 14	+
Grand Total	=

Make checks payable to **Fedco**

Final order deadline March 9, 2018

- **See complete ordering information on page 34.**
- For early delivery of rootstock or for scionwood, order online or use the scionwood form (p. 37) in this catalog.
- If you require Priority Mail delivery, minimum shipping charge is $25; 20% for orders with an adjusted total over $125.
- We will add a $10 handling fee each time you ask us to make adjustments after we have received your order.
- We ship between March 30 and April 13; we will add a $15 handling fee if you specify a particular shipping date.
- Consider donating your refund to MeHO (the Maine Heritage Orchard) at MOFGA.

Help support
the Maine Heritage Orchard:

☐ Donate all my refund to MeHO
☐ up to $5.00
☐ up to $2.00

We accept Visa, MasterCard, American Express and Discover Card

Exp. Date

Fedco Trees 2018: Trees, Shrubs & other Plants

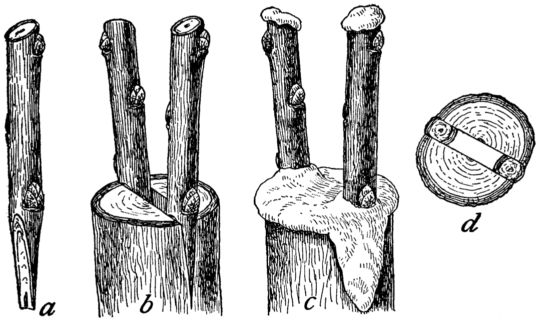
	Item #	Qty	# plants in pkg	Description	Price each	Total Price
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
					Subtotal (carry to other side)	

If you are ordering more than 28 items, copy this page or our format and submit as many pages as you need.

If you order *only* item numbers beginning with **L**, you qualify for our **Small & Light** shipping rate. See other side for details.

Comments:

Fedco Trees 2018
Scionwood
PO Box 520 Clinton ME 04927



Cleft grafting.

from mailing label CC ____________________

Deliver to:
Farm or Group Name ____________________
Name ____________________
US Mail ____________________
Town ____________ St ____ Zip ________
Ordering rootstock? Give us a **UPS address** if different: Street ____________________
Town ____________ St ____ Zip ________

Contact: phone ____________ email ____________________

Scionwood Total (from reverse)	+
Rootstock Total (from reverse)	+
Subtotal	=
1% Member discount (see p. 70)	-
Adjusted Total	=
Maine residents **only** add 5.5% **Tax**	+
Shipping	+
Grand Total	=

(Make checks payable to **Fedco**)

Shipping Charges: (we ship by UPS or Priority Mail, our choice)
Small & Light: You are ordering only scionwood.

	minimum	if your **Adjusted Total** is
Small & Light	$10.00	over $67.00, pay 15% of adjusted total
If you ordered rootstock and you live in the Continental U.S.		
	minimum	if your **Adjusted Total** is
	$22.50	over $150.00, pay 15% of adjusted total
Orders to **Alaska** go Priority Mail; be sure to give a *Postal Address*		
	minimum	if your **Adjusted Total** is
Priority Mail	$25.00	over $125.00, pay 20% of adjusted total

Scionwood, or scions, are twigs for grafting. They are $5 each and are approximately 8" long. **For larger quantities consider buying by the foot:** 10-foot minimum per variety, $4.50 per foot.

Scionwood quantities are limited, so order early. We try to provide wood that is close to 1/4" in diameter. When only smaller diameter wood is available, we send it out. If you do not want smaller diameter wood, leave a comment on your order and we'll refund your payment.

Please note: we ship scionwood in March only.

Deadline is **Feb. 16, 2018**, for ordering scionwood and rootstock for shipment around March 12, 2018*.

*Scionwood-only orders will possibly ship a little sooner and orders with rootstock will possibly ship a little later. **Remain calm.** You will receive an email notification when your order ships.

- **Upon receiving your order**, please inspect your scionwood immediately. Any shipping errors, unlabeled scionwood, or scion abnormalities should be reported to Fedco Trees ASAP.
- **Store scionwood** in a dark location with temperatures between 32 and 38° F, triple-bagged in plastic. Your scionwood should remain viable well into May.
- **For more information about varieties**, please check our website: fedcoseeds.com/trees.
- **For grafting supplies and literature**, please refer to the Organic Growers Supply section of the Fedco Seeds catalog.
- **If you'd like to learn more about grafting**, please join us on March 25, 2018 at MOFGA's Seed Swap and Scionwood Exchange in Unity, ME, or check our website in March for a list of spring grafting classes in Maine.

Help support the Maine Heritage Orchard:
☐ Donate all my refund to MeHO
☐ up to $5.00
☐ up to $2.00

We accept Visa, MasterCard, American Express and Discover Card
☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Exp. Date
☐☐ ☐☐

Fedco Trees 2018: Scionwood

	How many	
Apples	sticks	feet
L-801 Alexander		
L-802 Ashmead’s Kernel		
L-803 Ashton Bitter		
L-804 Baldwin		
L-805 Beacon		
L-806 Belle de Boskoop		
L-807 Ben Davis		
L-808 Bethel		
L-809 Binet Rouge		
L-810 Bitter Pew		
L-811 Black Gilliflower		
L-812 Black Oxford		
L-813 Blue Pearmain		
L-814 Briggs Auburn (Waldo)		
L-815 Brock		
L-816 Brown’s Apple		
L-817 Bullock		
L-818 Calville Blanc d’Hiver		
L-819 Canadian Strawberry		
L-820 Charette		
L-821 Cherryfield (aka Collins)		
L-822 Chestnut		
L-823 Chisel Jersey		
L-824 Cole’s Quince		
L-825 Cora’s Grand Greening		
L-826 Cortland		
L-827 Cox’s Orange Pippin		
L-828 Dabinett		
L-829 Dixmont Crab		
L-830 Domaines		
L-831 Ellis Bitter		
L-832 Empire		
L-833 Esopus Spitzenburg		
L-834 Everett Cunningham		
L-835 Fallawater		
L-836 Fameuse		
L-837 Fuel Service		
L-838 Gala		
L-839 Garden Royal		
L-840 Ginger Gold		
L-841 Golden Russet (of NY)		
L-842 GoldRush		
L-843 Granite Beauty		
L-844 Gravenstein		
L-845 Gray Pearmain		
L-846 Green Sweet		
L-847 Grimes Golden		
L-848 Haralson		
L-849 Harrison		
L-850 Harry Masters Jersey		
L-851 Hayford Sweet		
L-852 Holzer Russet		
L-853 Honeycrisp		
L-854 Honeygold		
L-855 Idared		
L-856 Jefferis		
L-857 Jonagold		
Column 1 Total		

	How many	
	sticks	feet
L-858 Jonathan		
L-859 Kavanagh		
L-860 Keepsake		
L-861 King David		
L-862 King of Tompkins County		
L-863 Kingston Black		
L-864 Liberty		
L-865 Macoun		
L-866 Maiden Blush		
L-867 Major		
L-868 Martha crab		
L-869 McIntosh		
L-870 Medaille d’Or		
L-871 Mollie’s Delicious		
L-872 Moses Wood		
L-873 Nehou		
L-874 New Brunswicker		
L-875 Newtown Pippin		
L-876 Nodhead		
L-877 Northern Spy		
L-878 Opalescent		
L-879 Paulared		
L-880 Pomme d’Or		
L-881 Pomme Gris		
L-882 Porter’s Perfection		
L-883 Pound Sweet		
L-884 Prima		
L-885 Red Astrichan		
L-886 Red Baron		
L-887 Red Gravenstein		
L-888 Redfield		
L-889 Reinette Simirenko		
L-890 Rhode Island Greening		
L-891 Ribston Pippin		
L-892 Roxbury Russet		
L-893 Sand Hill		
L-894 Sansa		
L-895 Screen Shot		
L-896 Shavel Sharp		
L-897 Shizuka		
Column 2 Total		

	How many	
	sticks	feet
L-898 Sidrunkollane Talioun		
L-899 Smokehouse		
L-900 Somerset Redstreak		
L-901 Spartan		
L-902 Spice Sweet		
L-903 St. Edmund’s Russet		
L-904 St. Lawrence		
L-905 Stark		
L-906 Starkey		
L-907 State Fair		
L-908 Sweet Sixteen		
L-909 Tolman Sweet		
L-910 Trailman		
L-911 Tumanga		
L-912 Twenty Ounce		
L-913 Wagener		
L-914 Washington Sweet		
L-915 Wealthy		
L-916 Westfield Seek-No-Further		
L-917 Whitney Crab		
L-918 Wickson		
L-919 Williams Pride		
L-920 Windham Russet		
L-921 Winekist		
L-922 Winesap		
L-923 Winter Banana		
L-924 Wolf River		
L-925 Yarlington Mill		
L-926 Yellow Bellflower		
L-927 Yellow Transparent		
L-928 Zabergau Reinette		
Perry Pears		
L-929 Blakeney Red		
L-930 Butt		
L-931 Gin		
L-932 Hendre Huffcap		
L-933 Yellow Huffcap		
Column 3 Total		
Total Number Ordered		
$ Total Sticks (@$5.00 ea.)	$	
$ Total Feet (@$4.50/ft)	$	

(Minimum 10 feet per variety)

Scionwood sticks are around 8" long with a 1/4" caliper when possible. $5.00/stick.

For larger quantities, order by the foot for $4.50/foot. (10' minimum)

ROOTSTOCK—bundle of 10

Rootstock is approximately 1/4" caliper.

See page 16 for descriptions.

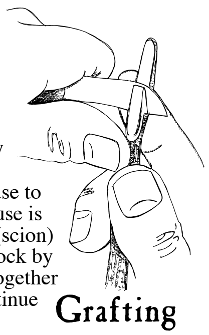
		Price	Qty	$Total
226-B	Malus Antonovka	$29.50		
227-B	M. Budagovsky 118	$29.50		
228-B	M. M111	$29.50		
229-B	M. Geneva 11	$33.50		
230-B	M. Budagovsky 9	$29.50		
231-B	Prunus americana	$29.50		
232-B	P. avium	$29.50		
233-B	P. cerasifera	$29.50		
234-B	Pyrus OHxF97	$29.50		
	Bundles Ordered			

Propagation at a Glance

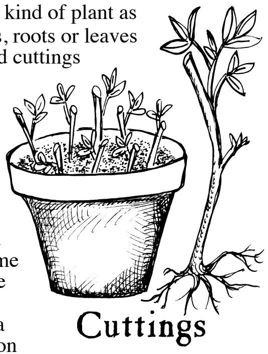
There are hundreds of ways to propagate plants. Maybe thousands. Here's a rudimentary outline of our most commonly used methods. No matter the method, it requires care, attention, time and observation. It's a lot of fun and very satisfying to root your own plants. It's especially useful when the plant is rare and hard to find elsewhere. You'll need to research the plant you wish to propagate to know which method is likely to be most successful.

Here are some of our favorite resources for plant propagation:

- *The Grafter's Handbook* by Robert J. Garner
- *Secrets of Plant Propagation* by Lewis Hill
- *Native Trees, Shrubs & Vines* by William Cullina
- *The Reference Manual of Woody Plant Propagation* by Michael Dirr and Charles Heuser, Jr.

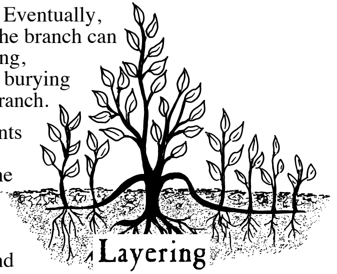


Grafting is joining together parts from two trees so they fuse into one. There are many ways to graft, but whip-n-tongue grafts are one of the most common methods we use to clonally propagate our tree fruits. The other method we use is bud grafting. For whip-n-tongue, attach a dormant twig (scion) collected from the tree you want to propagate to a rootstock by making matching cuts in each piece then binding them together with tape. The two pieces join vascular systems and continue growing as one plant. Sound like magic? It totally is.

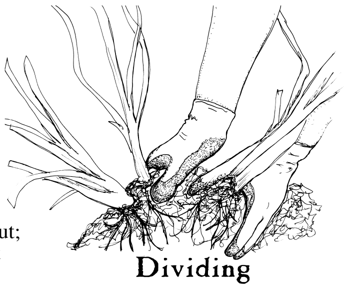


Cuttings are another way to get the exact same kind of plant as the parent. Cuttings can be rooted from branches, roots or leaves of many herbaceous and woody plants. Softwood cuttings are taken in spring when the plant is actively growing. Hardwood cuttings are taken when the wood is dormant in winter. Some cuttings, like those taken from willows, need very little encouragement to root. Others may need to be dipped in a rooting hormone to convince them to become roots.

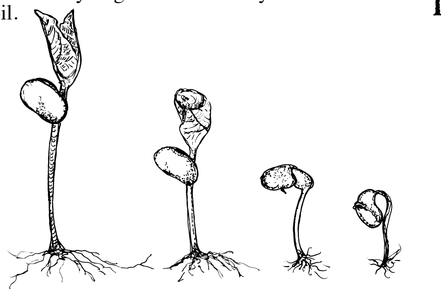
Layering encourages a plant to grow roots on a branch while it is still attached to the parent. Some plants naturally layer themselves in the wild, like raspberry canes that arch to the ground and root their tips. You can imitate this by pulling down a branch from a shrub or vine, putting a little soil on top and anchoring it with a heavy stone. Eventually, where there are buds, roots will grow. The branch can then be cut into individual plants. Stooling, another form of layering, is achieved by burying the whole base of the plant, not just one branch.

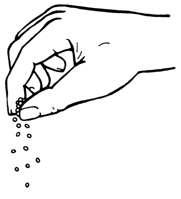


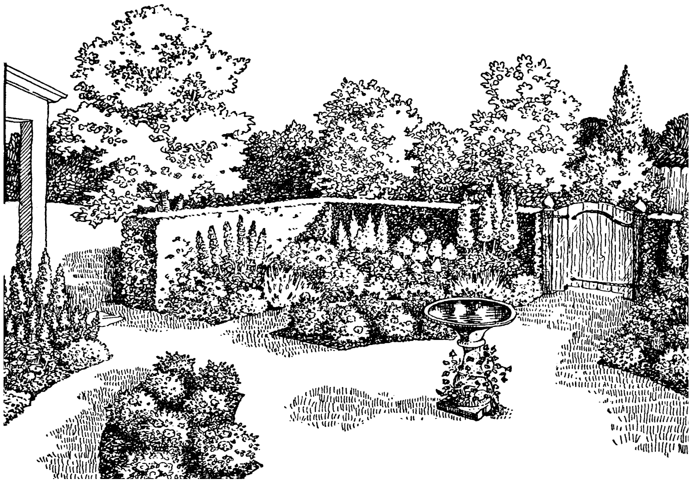
Divisions can be easily made from plants that form bulbs, corms, tubers, or that sucker. Dig up and tease or slice apart the clumps, and replant them for quick plant multiplication. Many garden perennials appreciate periodic division for health and vitality. Certain woody and herbaceous plants can be split at the roots as a way of dividing. Woodies must be divided when dormant. Herbaceous perennials are more forgiving and can tolerate division during the growing season if watered sufficiently.



Seeds are the most ancient and straight-forward way to propagation. Even a mouse can do it! Each seedling will be genetically unique. Some seeds need to be chilled (stratified), scuffed (scarified), or fermented in order to sprout; others are ready to go as soon as they hit the soil.



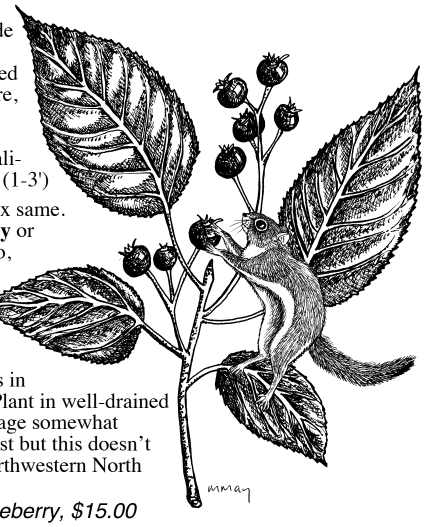




Small Trees and Shrubs

Green's Nursery catalog from 1904 explains that "there are many trees that by pruning can be made to resemble shrubs, and many shrubs that by different pruning may be made to produce medium-sized trees." Peruse our sidebars for tips on pruning and information about hedgerows.

Amelanchier Also called **Juneberry**, **Parsonberry**, **Serviceberry**, **Saskatoon**, **Shadblow**, **Shadbush** and **Shad**. Folks downeast call it **Wild Pear.** Very hardy genus of spring-flowering shrubs and small trees with edible berries. Beautiful fragrant 5-petaled white flowers are early harbingers of spring in Maine. Purplish-black sweet berries good in pies, cobblers, jellies, jams, smoothies and cakes. Berries are about the size of a lowbush blueberry, or a bit larger, and seedier. Popular with wildlife. Nice red-orange fall color. Thrives along stream beds as well as on rocky slopes. Tolerates partial shade, salt, pollution and wet spots but not standing water. **Considered to be self-fruitful but** we recommend planting with other Amelanchiers to ensure pollination. Taxonomy of Amelanchiers are a point of confusion in the nursery trade where common names and even botanical names are used interchangeably. Furthermore, these plants easily hybridize with each other in nature. Below, we've highlighted salient features of each species. (1-3')



***A. alnifolia* 'Regent'** 4-6' x same. Commonly called **Juneberry** or **Saskatoon**. J. Candrian intro, Faribault, MN, 1997. An open-pollinated seedling originating near Regent, ND. Compact prolific shrub with sweet purple-magenta berries. Fruit ripens in mid-July in central Maine. Plant in well-drained fertile soil and full sun. Foliage somewhat susceptible to leaf spot or rust but this doesn't affect the fruit. Native to northwestern North America. Z2.

439A Regent Juneberry, $15.00

***A. laevis* Allegheny Serviceberry** 15-25' The most common Amelanchier in Maine. The unique purplish-orange bronzed color of the unfolding leaves on this understory tree is a favorite spring sight. Pendulous white blossoms precede the young leaves and are followed by berries that ripen in midsummer. Referred to as **Shad** or **Shadbush** by old-timers because the blossoms coincide with the spring shad run in certain Maine streams. Likes well-drained acid soils along the edge of fields, streams and roads. Native midwest to eastern U.S. and Canada. Z2.

440A Allegheny Serviceberry, $15.00

Cultivars and varieties

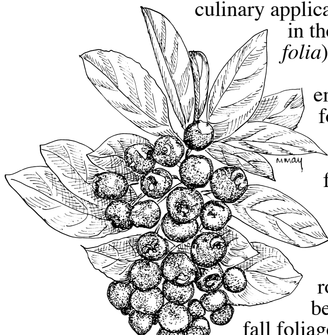
Cultivar is short for 'cultivated variety.' A **cultivar** is a plant that has been bred; it does not occur naturally in the wild.

A **variety** is a plant that occurs naturally in the wild and is chosen for commercial propagation to maintain its genetic characteristics.

In the nursery trade, the terms 'cultivar' and 'variety' are mistakenly used interchangeably. Both cultivar and variety names follow the botanical name (*Genus species*) and are enclosed in single quotes.

In the tree and shrub world, most cultivars and varieties are propagated clonally by cuttings or grafting. When there is no variety or cultivar name after the botanical name, the plant is most likely grown from seed. We often refer to these as "the species" of a plant, or as seedlings.

Aronia Chokeberry Aronia has gotten a lot of press in recent years as a superfruit: it has wonderful medicinal qualities, works well in a range of culinary applications and is an important wildlife plant in the native landscape. Both red (*A. arbutifolia*) and black (*A. melanocarpa*) chokeberries are edible when cooked, but we emphasize the red for wildlife, while the black may be a better choice for medicine and food. Black chokeberries are commercially cultivated for their high levels of antioxidants and myriad health benefits. Both species are small rounded shrubs with blueberry-sized fruit and electric-red fall foliage. Begins to bear fruit in its third year and increases to full yield around five years. Ripens in late July or early August. If not harvested, the berries will hang on the bushes until songbirds eat them in late winter. Will form colonies. Not particularly picky about where it grows: adaptable to moist or dry areas, sun or partial shade. Free of diseases and insects. Native to eastern U.S. **Self-fruitful**. Z3/4. All are **ME Grown.** (1-3')



A. arbutifolia 'Brilliantissima' 6-8' x 3-4' In *The Best of the Hardiest*, John Sabuco calls red chokeberry "one of our finest native landscape shrubs." Upright multi-stemmed form. Dense clusters of small white flowers with red stamens. Birds love the abundant persistent glossy bright red fruit. With "brilliant" fall foliage, this plant is the best alternative to the invasive burning bush.

442A Brilliantissima Red Chokeberry, $15.00

_A. a._ Red Chokeberry Seedlings 6-10' x 3-6' Each one is genetically unique. Beautiful in mass plantings and borders. Plant several in a hedge and make the birds happy!

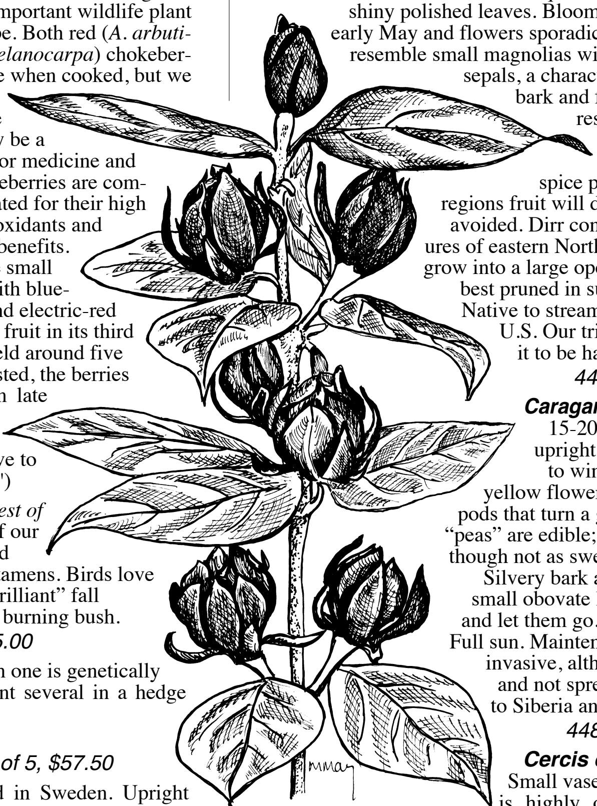
443A Red Chokeberry Seedling, $14.00
443B Red Chokeberry Seedlings, bundle of 5, $57.50

A. melanocarpa 'Viking' 4-6' x same. Introduced in Sweden. Upright vigorous high-yielding shrub produces large dark tasty berries.

445A Viking Black Chokeberry, $15.00

_A. m._ Black Chokeberry Seedlings 3-6' x same. Each one is genetically unique. Plant several for an attractive edible hedge.

446A Black Chokeberry Seedling, $14.00
446B Black Chokeberry Seedlings, bundle of 5, $57.50



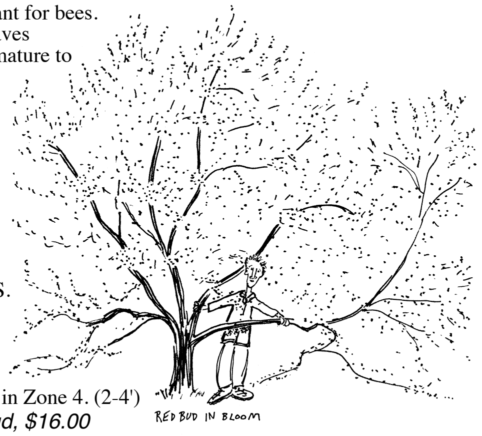
Calycanthus floridus Carolina Allspice 6-10' x 6-12' Beautiful aromatic native shrub with unique 1" dark burgundy-maroon flowers and shiny polished leaves. Blooms while breaking dormancy late April-early May and flowers sporadically through summer. Upright flowers resemble small magnolias with petals spiraling into similar-looking sepals, a characteristic of many primitive plants. Leaf, bark and flowers all highly fragrant of an aroma resembling spiced apples. Bark is edible, tastes very similar to cinnamon bark, and can be used the same way to spice puddings, toast and desserts. In warmer regions fruit will develop but is poisonous and should be avoided. Dirr considers this plant one of the great treasures of eastern North America, especially when allowed to grow into a large open specimen. Flowers on new wood so best pruned in summer. Partial sun and moist rich soil. Native to stream edges and woodlands of southeastern U.S. Our trials in central Maine are so far proving it to be hardy in Zone 4. Z4/5. (1-3')

447A Carolina Allspice, $15.00

Caragana arborescens Siberian Peashrub 15-20' Nitrogen-fixing cheerful bright green upright multi-stemmed oval shrub well-suited to windbreaks, hedges and borders. Delicate yellow flowers in spring are followed by small seed pods that turn a golden yellow. The pods and the small "peas" are edible; eaten raw, they taste like garden peas, though not as sweet. Makes an acceptable chicken feed. Silvery bark and compound foliage, each with 8–12 small obovate leaflets. Easy to grow; just put them in and let them go. Adaptable to poor soils, drought, salt. Full sun. Maintenance free. Occasionally rumored to be invasive, although ours have stayed put for decades and not spread by seed or root. Self-fertile. Native to Siberia and Manchuria. Z3. (1-3')

448A Siberian Peashrub, $14.25

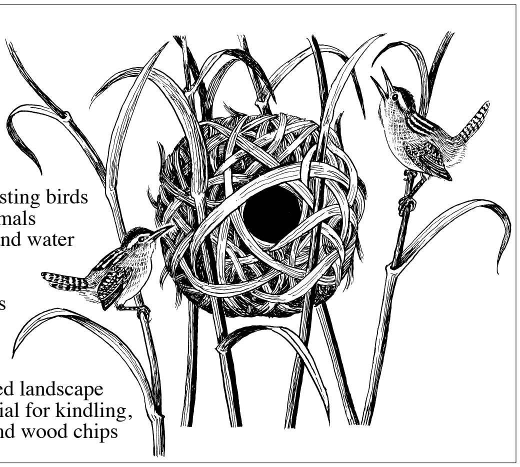
Cercis canadensis Redbud 25-30' x same. Small vase-shaped single- or multi-stemmed tree is highly ornamental with edible flowers and seeds. In early spring, clusters of small brilliant purplish-pink pea-like flowers are so abundant they fill the entire tree, dotting the branches and even coming right out of the trunk. Flowers edible raw or cooked. Flat leguminous 2–3" pods have roastable edible seeds high in antioxidants. Nitrogen-fixing tree is also valuable as an early-season nectar plant for bees. Large heart-shaped leaves emerge opaque pink, mature to deep green and turn yellow in fall. Smooth dark bark becomes plated and brick-red with purple undertones. Sun or partial shade, soil adaptable. Fine as a specimen tree or in groups. Native to central and eastern U.S. and may not reach full maturity size in northern areas. Customers report that it is reliably blooming in Zone 4. (2-4')



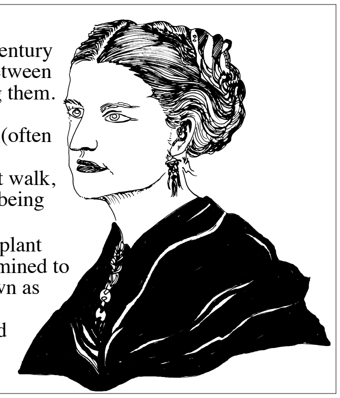
449A Redbud, $16.00

Hedgerows Provide:

- forage for birds, bees, butterflies, hummingbirds, moths, beneficial insects and humans
- protection for nesting birds and migratory animals
- erosion control and water conservation
- privacy screens, windbreaks, mazes or secret gardens
- texture, aroma, character and color in a cultivated landscape
- renewable material for kindling, crafts, bouquets and wood chips



Kate Furbish: Maine's Dauntless Plant Exporer



In the spring of 1870, in classic Yankee fashion, 36-year-old Kate Furbish (1834-1931) broke the traditional bonds of 19th-century womanhood and set forth to single-handedly collect, classify and illustrate all the native plants and mushrooms of Maine. Between 1870 and 1908, Kate happily traveled by herself, willfully wandering into remote wilderness, seeking out plants and painting them.

In a 1909 letter to William DeWitt Hyde at Bowdoin College, Kate explains her adventurous collection methods:

"I have wandered alone for the most part, on the highways and in the hedges, on foot, in hayracks, on country mail-stages (often in Aroostook, too, with a revolver on the seat), on improvised rafts (equipped with hammer, saw, nails, knife, rubber boots, vasculum, etc.), in row-boats, on logs, crawling on hands and knees on the surface of bogs, and backing out when I dared not walk, in order to procure a coveted treasure. Called 'crazy,' a 'fool'—and this is the way that my work has been done, the flowers being my only society, and the manuals the only literature for months together. Happy, happy hours!"

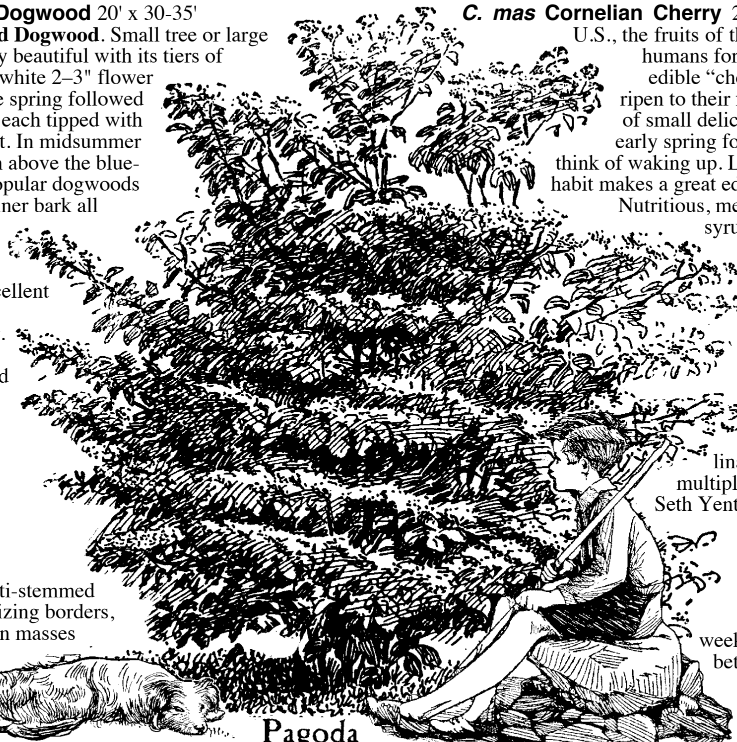
In 1880, Kate made her most famous discovery up in the Allagash along the banks of the St. John River. It was a mystery plant unlike anything she had ever seen before. She sent a specimen of the plant to Harvard for identification. The plant was determined to have been found nowhere else in the entire world and in 1881 was named *Pedicularis furbishiae* in her honor. It is now known as the Furbish Lousewort or Miss Furbish's Wood Betony.

Kate's passion for plants generated a stunning collection of more than 4,000 sheets of dried specimens of Maine plants and ferns, and16 portfolios of watercolor drawings, which are currently being held in special collections at Bowdoin College in Brunswick, ME. For information go to their website: library.bowdoin.edu/arch/mss/kfg.shtml

***Cornus alternifolia* Pagoda Dogwood** 20' x 30-35' Also known as **Alternate-Leaved Dogwood**. Small tree or large multi-stemmed shrub, particularly beautiful with its tiers of horizontal branches and fragrant white 2–3" flower clusters. These appear in mid-late spring followed by immature olive-green berries, each tipped with a tiny bright yellow style remnant. In midsummer clusters of dark blue berries ripen above the blue-green foliage. One of the most popular dogwoods with the birds. Roots, bark and inner bark all medicinal. Prefers partial shade and moist well-drained acid soil, but tolerates full sun, poor soil and even clay. pH adaptable. Excellent naturalized as a specimen or in groups. Reddish-purple fall color. Susceptible to golden canker: when dormant, prune out diseased branches to prevent spores spreading to the trunk. Native to eastern U.S. Z3. **ME Grown.** (1-3')

452A Pagoda Dogwood, $16.00

452B Pagoda Dogwood, bundle of 5, $67.50



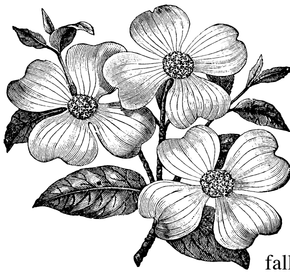
Pagoda Dogwood

***C. amomum* Silky Dogwood** 8-12' x same. Large rounded multi-stemmed rangy shrub best used for naturalizing borders, streams and wetlands. Effective in masses or even as windbreaks where erosion control, wildlife or pollinator habitat is needed. Medium-fast growing. Creamy white cymes 2" across bloom in late spring followed by blue berries in midsummer. Medium-dark green foliage turns purple in the fall. Songbirds love the berries. Prefers moist well-drained soils but will tolerate wet locations, too. Does not like dry areas. Sun or partial shade. Easy to transplant. Native to eastern U.S. Z4. **ME Grown.** (1-3')

453A Silky Dogwood, $16.00

453B Silky Dogwood, bundle of 5, $67.50

***C. kousa* var. *chinensis* Kousa Dogwood Seedling** 20-30' x same. Also referred to as **Chinese Dogwood**. Introduced by EH Wilson, Hubei, China, 1907. Horizontally spreading small specimen tree or large shrub covered with layers of 3–5" milky-white blossoms for up to 6 weeks in early summer. The pointed bracts give blossoms a starlike appearance followed by deep pink edible exotic fruit the size of ping-pong balls. Peel off the skin or simply squeeze it open and bite into the custardy pulp. The flesh is sweet, mild and reminds us of pawpaw. Tan, grey and faint orange exfoliating bark. Scarlet-orange-yellow fall foliage. Used up north as an alternative to the iconic southern dogwood tree, *C. florida*. Resistant to dogwood anthracnose and borer. Prefers light well-drained soils with an abundance of air and sun, but it'll tolerate shade and damper areas. Very adaptable. Native to China and Japan. Z4. **ME Grown.** (2-5')



454A Kousa Seedlings, $16.00

454B Kousa Seedlings, bundle of 5, $67.50

***C. mas* Cornelian Cherry** 20-25' x 15-20' Gaining popularity in the U.S., the fruits of this Old World gem have been harvested by humans for thousands of years. Bright red pear-shaped edible "cherries" set heavily in late summer. Let them ripen to their full sweet potential before picking. Clusters of small delicate yellow flowers cover the leafless tree in early spring for a striking show before the forsythias even think of waking up. Long-lived large shrub with upright rounded habit makes a great edible hedge or can be pruned to a small tree. Nutritious, medicinal, high in vitamin C and good in jam, syrup, tarts, fruit leather and wine. The wood is hard and strong, once used for spears and wheel spokes. This plant has it all. Prefers well-drained soil and full sun but otherwise adaptable. Likely to bear fruit in 2–3 years. Of the two cultivars listed, Fedco friend and consultant Tom Vigue says, "Pioneer may sound like the more worthwhile of the two, but I wouldn't be without Elegant. It is truly delicious. I believe having two cultivars improves pollination success." **Partially self-fertile**—plant multiples to improve yields. Grafted and grown by Seth Yentes of North Branch Farm. Native to Europe and Asia. Z4/5. All are **ME Grown.** (2-5')

***C. m.* 'Elegant'** Bred by Svetlana Klimenko, a Ukranian botanist at the Central Botanic Garden in Kiev. Selected for good fresh-eating flavor. Ripens around the third week of August in Maine. Picking window lasts between two and three weeks. Fruits are about 1¼" long with a very slender elongate shape. Soft flesh is tricky to pit so best eaten out of hand.

455A Elegant Cornelian Cherry, $27.50

***C. m.* 'Pioneer'** Another Klimenko intro with good flavor. More tart than Elegant but better for processing. Ripens around the first week of September in Maine, about one week after Elegant. Picking window lasts for three or four weeks. Fruits mature to about 1½" long and have a pronounced fat pear shape. Firm flesh is easy to pit.

456A Pioneer Cornelian Cherry, $27.50

***C. m.* Cornelian Cherry Seedlings** Each one will be unique. Plant several for genetic diversity. They will pollinate each other and any named cornelian cherry cultivar.

457A Cornelian Cherry Seedling, $16.00

457B Cornelian Cherry Seedlings, bundle of 5, $67.50

C. sericea* Redosier Dogwood** 8-10' Formerly called ***C. stolonifera. Broad loosely rounded multi-stemmed shrub spreads freely by stolons (underground stems) and forms excellent hedges and borders. Most admirable in the winter when the masses of brilliant red stems contrast a backdrop of freshly fallen snow. Bring them inside and enjoy them in wreaths and arrangements. By June, the stems are hidden by dark green foliage and sprinkled with tiny 4-petaled star-shaped flowers. Whitish berries in 2–3" clusters are popular with dozens of bird species. One of the most valuable of our native wildlife plants. Perfect for swamps, streams and wetlands. Very adaptable to a range of soils and climates, but generally likes wet conditions. Sun or partial shade. Fast growing and easy to transplant. To improve stem color, prune out older stems in the spring. Native to eastern U.S. Z2. **ME Grown.** (1-3')

458A Redosier Dogwood, $16.00

458B Redosier Dogwood, bundle of 5, $67.50

Susan Gawler: Protector of Maine's precious plants

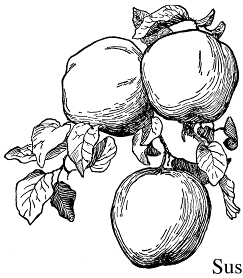
In 1880, Maine botanical artist and naturalist Kate Furbish (see opposite) brought Furbish's Lousewort, *Pedicularis furbishiae*, to the attention of the world. This incredible little plant can withstand ice scour of the river bank, hosts only one kind of bumblebee, reproduces by seed only, and as a young seedling, attaches itself to the roots of other plants to obtain nutrients. After Furbish died, the Lousewort was neglected and declared extinct in 1975. Then, almost a century after Furbish's original discovery, scientists found the plant growing in the St. John Valley of northern Maine. For 30 years, botanist Susan Gawler (1955-2015) led the ongoing task of mapping this plant's location. Due to its endangered species status, the Lousewort and the people who worked to protect it halted the proposed construction of the $227-million Dicky-Lincoln Dam on the upper St. John River. If you've ever paddled the St. John River in springtime, you know how special it is to ride this wild river unobstructed all the way to the Canada border.

It takes a special indefatigable type of person who is in tune with the subtleties of the natural world to find, love and seek to protect rare plants. Sue Gawler was one of those people. Professional botanist, taxonomist, plant explorer, author and professor, Gawler's passion was her love for the native species of Maine. She earned a doctorate for thesis work on Furbish's Lousewort and became the leading expert on Maine's rare plants, working closely with the critical-areas program of Maine State Planning Office, which catalogs the natural riches of the state, from waterfalls to wildflowers. Gawler's scientific writings include a book titled *Natural Landscapes of Maine: A Guide to Natural Communities and Ecosystems*. Locals knew her to be a kind, community-minded person. She co-founded the Belgrade Lakes Farmers Market where she sold flowers from her Belgrade garden. She worked with John Bunker to help renovate the plant life on Pine Island Camp after fires destroyed the area.

Even toward the end of her life, as she lived with ALS, she wrote a booklet titled *The Shrubs of Your Camp*. She believed that if you could learn to identify the precious flora around you, you too might love and protect it. In this way, she touched many lives and thanks to her, our state is the better for it.

***Crataegus laevigata* English Hawthorn** 15-20' x 12-20' Shrubby thorny low-branching dense tree with glossy deep-green lobed foliage. Upright oval form. Small white flowers emerge in early spring followed by $^1/_2$" fruit known as "haws," which redden in fall. Mealy mild fruit contain 2–3 nutlets and are largely undesirable for fresh eating, though commonly processed for medicinal tea, tincture, syrup or other preserves. In fact, leaves, buds, flowers, fruit and seed are all beneficial to health. This species is the traditional hawthorn used for centuries as a circulatory and cardiovascular tonic herb. Harvest berries by cutting off loaded branches with pole pruners. Traditionally used for livestock hedges throughout the world. Use caution around the very sharp thorns, which can puncture tractor tires or shoes! Adaptable to a wide range of soils. Prefers full sun. Native to Europe and N. Africa. Z4. (9-18")

462A English Hawthorn, $16.00
462B English Hawthorn, bundle of 5, $65.00



***Cydonia oblonga* Quince** 10-25' A small tree with large aromatic tan or yellowish fruit shaped like a cross between a pear and an apple. Usually eaten in stews, marmalades and jellies. Sometimes added to hard cider. At one time, every Maine dooryard had a quince. Cultivated for millennia, the "golden apple" has quite the history: in ancient times, a gift to Greek brides on their wedding day; in colonial American homesteads, a staple pectin fruit; in Edward Lear's classic, the Owl and the Pussycat's picnic treat. Large white to pink flowers. Wood of mature trees becomes impressively gnarled and twisted.

Similar soil requirements to other fruit trees. Plant in full sun and space 15–20' apart. Prune like an apple tree. Needs protection from apple borers. Susceptible to fireblight. Fruit may not ripen in coldest areas. Not to be confused with Flowering Quince, the ornamental shrub *Chaenomeles*, which has smaller fruit. **Self-fruitful but** planting more than one will give better yields. Native to Asia. Z4/5. (2-5')

***C. o.* 'Aromatnaya'** A hardy Russian variety, bred for disease resistance. Fedco grower Carol Armatis gave us jelly she made from this cultivar, which she has growing in Newport. It was fantastic! Citrusy, fragrant with an orangey-pink hue—not like anything we've tasted. Ripens in October in central Maine.

464A Aromatnaya Quince, $31.25

***C. o.* 'Pineapple'** Named by Luther Burbank for pineapple-like flavor when made into jelly. Large smooth light golden-yellow fruit with tart white flesh. Good for fresh eating, jelly or winemaking. Late bloomer ripens in late summer.

466A Pineapple Quince, $31.25

***C. o.* 'Smyrna'** Brought from Smyrna, Turkey, by Californian GC Roeding, whose father Fred brought the famous Smyrna fig to the U.S. Oblong furrowed pear-shaped fruit with golden-yellow skin and mild light yellow flesh. Pink flowers. Good keeper. Ripens late summer to early fall.

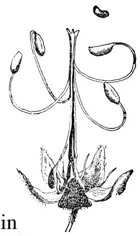
467A Smyrna Quince, $31.25

***Forsythia* x *ovata* 'Northern Gold' Forsythia** 6-8' x 5-7' Bred by Felicitas Svejda, Ottawa, Canada, 1979. One of the earliest forsythia cultivars to flower in spring. Upright form with yellow-grey branches clad in healthy rich green foliage. If your forsythia blooms only from the snow line down, you've been duped: don't buy cheap big-box forsythia. Northern Gold has not only the bud hardiness necessary for flower production above the snow line, but also outstanding golden-yellow flowers. You can have a full bloom every year! Prefers moderately fertile, slightly acid to neutral soils with good drainage. Makes an outstanding hedge. Bred from *F. ovata*, a hardy dependably blooming Korean species native to Asia and Europe. Z3. (1-3')

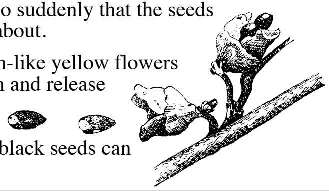
469A Northern Gold Forsythia, $14.25

Shooting Seeds: Explosive Reproduction Methods

One of the most exciting seed dispersal mechanisms to witness are the seeds that burst out into the world landing several feet away from the mother plant. Below are two super-cool examples.



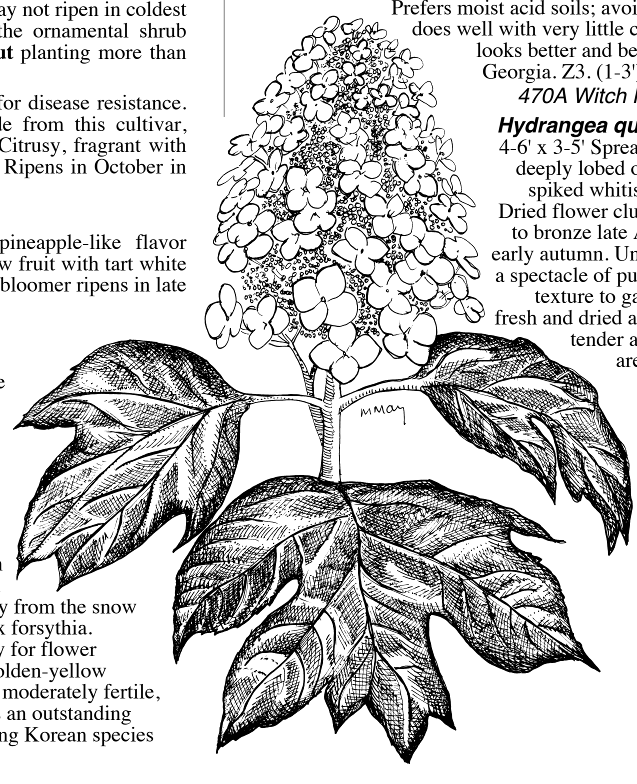
Wild Geranium: The seedbox of *Geranium maculatum* has five divisions. When in fruit, the seedbox tapers upwards into a long beak, hence the common name, cranesbill. At peak ripeness the fruit splits away from the central part of the beak in five seperate pieces that spring upward so suddenly that the seeds are jerked out of the cells and scattered about.



Witch Hazel: In autumn, ethereal ribbon-like yellow flowers appear just before the little tan nuts ripen and release their seeds in October. The ripe nuts of the witch hazel rocket their seeds into the world with such force that the shiny black seeds can land some 30 feet away.

***Hamamelis virginiana* Witch Hazel** 8-20' x same. A small irregular rounded fall-flowering medicinal tree or large shrub. Makes a soothing astringent with a seemingly endless number of uses from controlling acne to soothing diaper rash, baggy eyes (yes!), poison ivy, chicken pox, even an unhappy lovelife. Thayer's Witch Hazel Astringent is still available in your local drug store. Most preparations involve simply brewing tea from the leaves and/or twigs. Oval hazel-like textured foliage. Brilliant golden-yellow fall color. Quirky yellow flowers appear in early to mid November. "Witch" is said to refer to the odd flowering time or maybe it's because dowsers like to use the interesting forked branches to "witch" for water. Full sun or shade. Prefers moist acid soils; avoid dry spots. No pests or diseases, does well with very little care. We do nothing to ours and it looks better and better every year. Native Canada to Georgia. Z3. (1-3')

470A Witch Hazel, $16.50

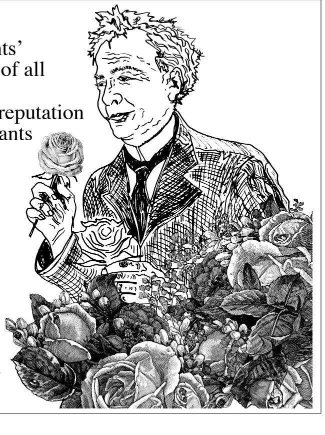


***Hydrangea quercifolia* Oakleaf Hydrangea** 4-6' x 3-5' Spreading native hydrangea with large deeply lobed oak-like leaves and protrusions of spiked whitish-pink double flowers July-Aug. Dried flower clusters up to 1' long turn from pink to bronze late August and remain intact through early autumn. Unique deep green foliage becomes a spectacle of purple, red and orange in fall. Adds texture to gardens and hedges. Great for both fresh and dried arrangements. Flower buds can be tender and may need protection in colder areas and windy sites. Moist, fertile and well-drained soil, sun to part shade. Rarely fed on by Japanese beetles. While most hydrangeas are complex hybrids, this species is native to southeastern U.S. Z5. (1-3')

471A Oakleaf Hydrangea, $15.75

ME Grown = grown in Maine at one of our small local nurseries

Luther Burbank: Plant Wizard of Santa Rosa

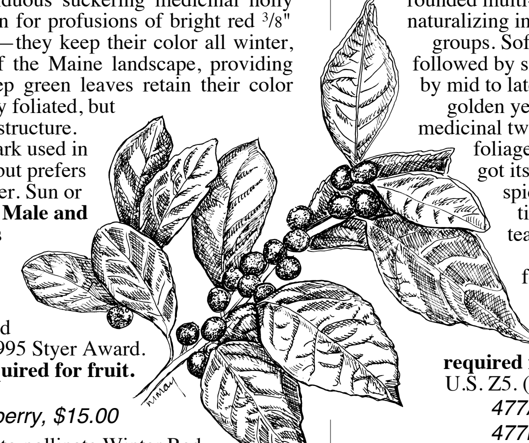


As a young child Luther Burbank (1849-1926) had a fascination with flora and a knack for making subtle observations of plants' characteristics that would go unnoticed by most. This natural intuition led him to be one of the most influential plant breeders of all time. During his 50-year career, he created more than 800 varieties of fruits, vegetables, nuts and flowers. To plums alone he contributed around 60 varieties. He worked incessantly from his 40-acre experimental farm near Santa Rosa, CA, gaining the reputation as a horticultural wizard who worked in mysterious ways. In 1893, he decided to start selling his highly sought-after hybrid plants and seeds through a 52-page mail-order catalog called "New Creations in Fruits and Flowers." Unique among catalogs at that time, its launch turned him into an international celebrity. Burbank opened the doors to once-unthinkable possibilities with plants, including creations like white blackberries, the first blight-resistant potatoes, and roses that bloomed all summer.

At a time when plant genetics was a new frontier, renowned breeders from all over the world traveled to Burbank's farm to learn the methods of the miraculous plant breeder everyone was talking about. To their disbelief, they found not the elaborate scientific explanation they anticipated, but an artistic self-taught "old-world" gardener. Burbank regarded Mendel's theory of passing on dominant and recessive plant traits to be just another way of talking about the hidden plant qualities he had been aware of all along. In Burbank's words: "First you establish an ideal. Then you select the ideal." There is no doubt that there was more of an art than a science to the way Luther Burbank worked. Maybe Frida Kahlo sensed this when she decided to paint Burbank's portrait, a strange and beautiful work.

While many of Burbank's fruit varieties tend to be better suited to warmer climates, we usually offer something of his. This year, we're offering Pineapple Quince (**466A**), as well as Pipestone plum (**324A**), which has Burbank parentage.

***Ilex verticillata* Winterberry** Also called **Black Alder**, **Fever Bush**, **Possumhaw**, **Swamp Holly** and more. Deciduous suckering medicinal holly with clusters of upright stems. Best known for profusions of bright red 3/8" berries that stand out after the leaves fall—they keep their color all winter, spectacular against the snow. A staple of the Maine landscape, providing late-spring forage for birds. Lustrous deep green leaves retain their color long after they're cut for decoration. Richly foliated, but open enough to display interesting branch structure. Leaves used for tea and tonic, astringent bark used in herbal medicine. Tolerates dry conditions but prefers moist or wet acidic soil, even standing water. Sun or partial shade. No serious pests or diseases. **Male and female plants required for fruit**, which is produced on female plants. Plant males within 30' of females. Native from midwestern to eastern U.S. Z4. (1-3')



***I. v.* 'Winter Red'** 9x8' **Female**. Mid-sized with darker green foliage. Winner of the 1995 Styer Award. **Southern Gentleman or Apollo male required for fruit.** **ME Grown.**

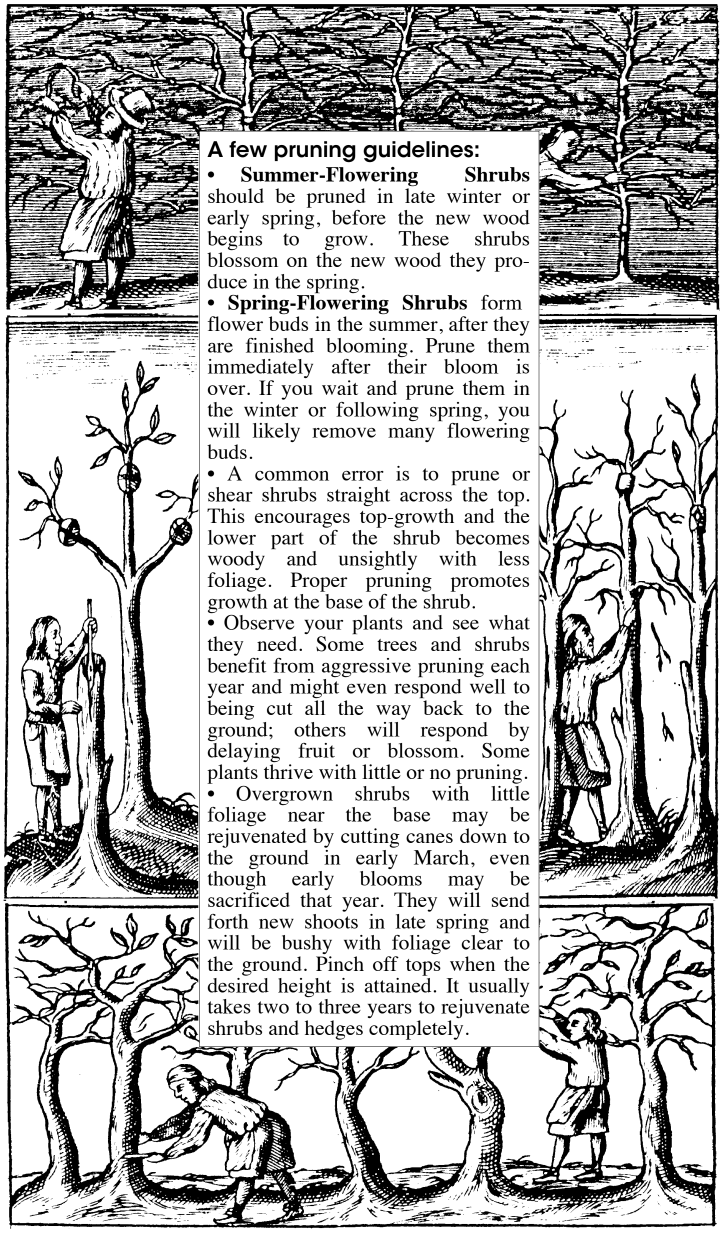
472A Winter Red Female Winterberry, $15.00

***I. v.* 'Apollo'** 6-8' x same. **Male** selection to pollinate Winter Red. Also pollinates Afterglow and Sparkleberry, which we've offered in the past. One will pollinate several females. **ME Grown.**

473A Apollo Male Winterberry, $15.00

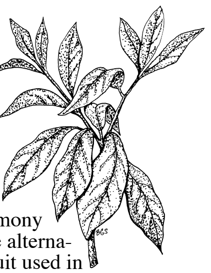
***I. v.* 'Southern Gentleman'** 6x6' **Male** selection to pollinate Winter Red or Sparkleberry. Don't be deceived by the name—it's hardy. One will pollinate several females.

474A Southern Gentleman Male Winterberry, $15.00



A few pruning guidelines:

- **Summer-Flowering Shrubs** should be pruned in late winter or early spring, before the new wood begins to grow. These shrubs blossom on the new wood they produce in the spring.
- **Spring-Flowering Shrubs** form flower buds in the summer, after they are finished blooming. Prune them immediately after their bloom is over. If you wait and prune them in the winter or following spring, you will likely remove many flowering buds.
- A common error is to prune or shear shrubs straight across the top. This encourages top-growth and the lower part of the shrub becomes woody and unsightly with less foliage. Proper pruning promotes growth at the base of the shrub.
- Observe your plants and see what they need. Some trees and shrubs benefit from aggressive pruning each year and might even respond well to being cut all the way back to the ground; others will respond by delaying fruit or blossom. Some plants thrive with little or no pruning.
- Overgrown shrubs with little foliage near the base may be rejuvenated by cutting canes down to the ground in early March, even though early blooms may be sacrificed that year. They will send forth new shoots in late spring and will be bushy with foliage clear to the ground. Pinch off tops when the desired height is attained. It usually takes two to three years to rejuvenate shrubs and hedges completely.



***Lindera benzoin* Spicebush** 6-12' x 8-12' Large rounded multi-stemmed native shrub suited to naturalizing in moist or wet areas, singly or in groups. Soft-yellow flowers early in spring followed by small clusters of glossy red berries by mid to late summer. Blue-green foliage turns golden yellow in fall. Edible berries and medicinal twigs and bark. Scratch the berries, foliage or stems and you'll know how it got its name: all three have a delicious lemony spicy scent and can be used as a native alternative to allspice. Leaves, twigs and fruit used in teas. Attracts bees, birds and butterflies. Prefers moist well-drained neutral or slightly acidic soils. Often found in full or partial shade, but at its showiest in full sun. We thought one had died a few years ago and dug it up, only to find that the roots were alive and ready to go. These are unsexed seedlings: **male and female plants required for fruit** so plant several for best results. Native to eastern U.S. Z5. (1-3')

477A Spicebush, $15.75

477B Spicebush, bundle of 5, $69.50

***Lonicera caerulea* Honeyberry** Also called **Haskap** or **Edible Honeysuckle**. Our Canadian neighbors are crazy about haskaps, ramping up commercial u-pick orchards, exporting fruit to Japan, and making fun treats like honeyberry jam and ice cream. Medium-sized fruiting shrub is somewhat similar in bush and berry to our native highbush blueberry. Small dark blue oval fruit is very high in antioxidants and ripens in June around or just before strawberries. Extensive breeding has led to improved flavor and larger fruit, which tastes like a mix between a raspberry and a blueberry. In the Japanese Ainu language, *haskap* means 'lots of little things on top of the branches.' Productive plants bear at a young age with proper pollination. Ten pounds of fruit per plant is possible after a few years. Will do well in most soils with a wide pH range (5.0–8.5). Extremely hardy. Low maintenance and disease free, though leaves may show sign of sunburn as season progresses. Native to Siberia and the Kuril Islands. Note pollination requirements below. Z2. All are **ME Grown.** (1-3')

***L. c.* var. *kamtschatica* 'Berry Blue'** 6-8' Recommended pollinator for Borealis and Indigo Gem, will pollinate up to 8 plants. Also called **Berry Smart Blue**. Introduced from the Czech Republic, Berry Blue has a different parentage from Borealis and Indigo Gem, which helps with pollination. Tart, but not too tart, the berries are plentiful, though smaller and less tasty than the varieties it pollinates. Good fresh or processed. Needs another honeyberry as a pollinator. Compared to other types it is quite ornamental, with lush green foliage and attractive upright pinkish-purple stems. Each leaf node is highlighted by vibrant coral-colored buds and stipules.

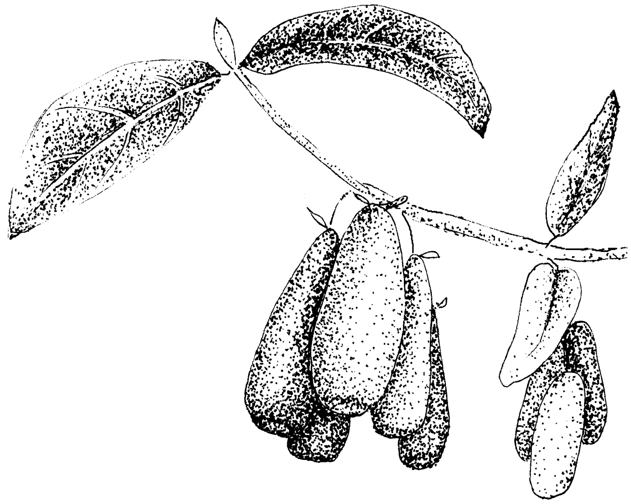
478A Berry Blue Honeyberry, $21.50

***L. c.* var. *edulis* 'Borealis'** 4-6' x same. U of Saskatchewan intro, 2007. The largest fruit in the Saskatchewan breeding program. Delicate fruit, not as firm as Tundra, which we've offered in the past. Recommended for home gardeners. Needs Berry Blue as a pollinator.

479A Borealis Honeyberry, $21.50

***L. c.* var. *e.* 'Indigo Gem'** 4-6' x same. U of Saskatchewan intro, 2007. Same parentage as Tundra and Borealis. Dr. Bob Bors, lead scientist of the University of Saskatchewan's honeyberry breeding program, considers it the preferred variety for fresh eating. Sweet and slightly tangy with a chewier texture than the other varieties. While Indigo Gem is smaller in stature than Borealis and Berry Blue, it has been the most productive variety in our nursery trials. Even one-year plants only 10" tall had a decent crop of fruit last June! Leaves susceptible to mildew and sunburn late season after fruiting. Needs Berry Blue as a pollinator.

480A Indigo Gem Honeyberry, $21.50

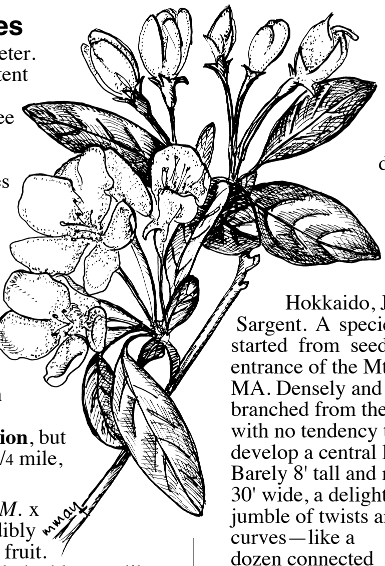


Malus Flowering and Culinary Crabapples

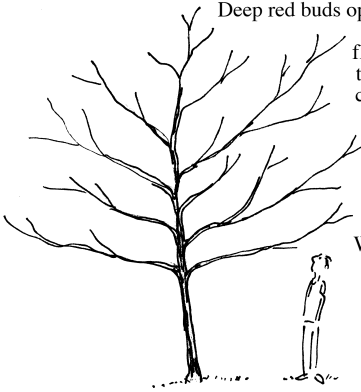
A crabapple is any apple with fruit smaller than 2" in diameter. Some crabs bear edible or culinary fruit. Some have persistent wildlife fruit that hangs on the tree for weeks or even months. Others have hardly any fruit at all. The flowers, tree form and even the shape of the leaves can vary subtly or profoundly. Most are magnificent in bloom and are often ornamental year round, especially in winter when the leaves drop and the trees show off their interesting forms. Although crabs prefer full sun and deep well-drained soils of 5.5–6.5 pH, they are quite forgiving and will thrive in many locations with a little TLC. They don't like to be drowned or starved for water, and they *do* need to be protected from borers, mice and deer. See instructions on pages 69 and 70.

Most crabapples require little or no pruning except when a branch is broken or you feel compelled to shape your tree in one way or another. We like to encourage each tree to assume its own unique form.

All crabapple trees need a second variety for pollination, but any apple or crabapple blooming at the same time, within 1/4 mile, will probably do. (2-5')

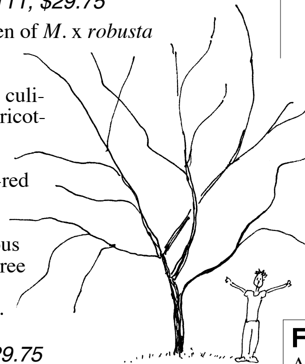


Brandywine 20x20' *M. ioensis* 'Plena' Klehm's No. 8 (*M.* x *purpurea* 'Lemoinei' x *M.* 'Klehm's Improved') Incredibly beautiful fragrant flowers followed by unbelievably bitter fruit. Deep red buds open to small deep pink double rose-like blossoms. Put an arrangement of these flowers in a vase, and people will swear they are roses. One of the most fragrant crabs. Some growers will hate the unattractive 1–2" yellow fruit that drops in the fall and makes a mess. Cidermakers will love it. Very high in tannin. In *Cider Digest* a few years ago, one grower wrote, "You ought to try planting a crab called 'Brandywine'. WOW!!! what a real mouth-killer as far as tannin goes… Couldn't tell you the acidity because my tongue had gone dead." Loosely rounded tree. Blooms late. Z4. **ME Grown.**



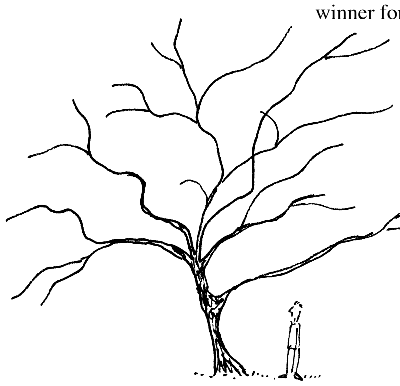
482C Brandywine Crabapple on M111, $29.75

Dolgo 25x30' From seed collected by NE Hansen of *M.* x *robusta* in 1897 at the Imperial Botanical Gardens, St. Petersburg, Russia. (*Dolgo* means 'long' in Russian.) Introduced in the U.S. in 1917. *The* classic culinary crab still found in old Maine backyards. Apricot-pink buds, large fragrant 2" pure white single flowers bloom early. Beautiful purple-red 1 1/2" teardrop-shaped fruit makes flavorful clear ruby-red jelly. In recent years the aromatic very sweet, very acidic fruit has found favor with cidermakers. Also useful for canning, pickling and delicious sauce. Vigorous large blocky upright spreading tree consistently yields abundant summer crops. Dependable pollinator for all apples. Very hardy. Z2. **ME Grown.**



483C Dolgo Crabapple on M111, $29.75

Donald Wyman 20x30' Chance seedling. Arnold Arboretum, 1970. If you can plant only one ornamental crab, consider Donald Wyman, named in honor of America's great horticulturist. Deep pink buds and large 2" single white flowers early in the season. The bloom is so intense, the tree looks like one massive flower. Beautiful rounded wide-spreading medium-sized tree with attractive glossy green foliage. Looks great when it has room to spread out. The shape alone is enough to recommend this cultivar. The bright 3/8" red oval fruit completely covers the tree in clusters and persists until spring when the birds clean it off in time for the next bloom. 2001 Carey Award winner for Distinctive Plants for New England. Disease free, although said to be slightly susceptible to powdery mildew. Z4. **ME Grown.**



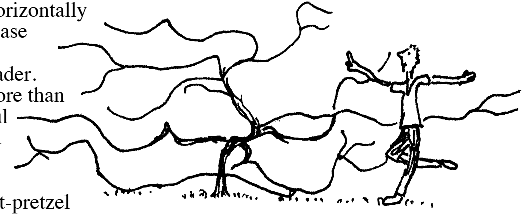
484C Donald Wyman Crabapple on M111, $29.75

ME Grown = grown in Maine at one of our small local nurseries

Robinson 25x25' CM Hobbs Nursery intro, Indianapolis, IN. Beautiful brilliant bright rosy pink single blooms. Not mauve or purple. Large loosely rounded upright habit. Small 1/2" deep red persistent fruit. Named for Hobbs Nursery's neighbors, who owned the original tree. That chance seedling almost certainly originated from a seed dropped and fertilized by a thoughtful bird who snatched an apple from the large nursery next door. Recommended for larger spaces. Disease free. Z4. **ME Grown.**

494C Robinson Crabapple on M111, $29.75

Sargent Crabapple, Mt. Auburn strain 8-10' x 20-30' *M. sargentii* Arnold Arboretum, 1892. Seed collected in Hokkaido, Japan, by one of America's most famous horticulturists, CS Sargent. A species rather than a variety, many of the Sargents have been started from seed: hence the variability. This one comes from the front entrance of the Mt. Auburn Cemetery in Cambridge, MA. Densely and horizontally branched from the base with no tendency to develop a central leader. Barely 8' tall and more than 30' wide, a delightful jumble of twists and curves—like a dozen connected pretzels trying to out-pretzel each other. Pink buds and profuse pure-white fragrant single flowers seem to bloom forever. Very small dark red-purple persistent fruit. Disease resistant. Z4. **ME Grown.**



496C Sargent Crabapple on M111, $29.75

Silver Cloud 10x10' (No. NR9-P3-89) (*M.* Satin Cloud x *M.* Shinto Shrine) Fiala/P Murray intro, Falconskeape, Medina, OH, 1990. Pale pink-white buds and white blooms. The effect is an amazing light pink throughout bloom time. Small rounded tree. Golden-copper-orange persistent fruit. Beautiful green leathery foliage. Productive, annually flowering and disease resistant. One of Fiala's magnificent polyploid creations (more than two sets of chromosomes). Z4. **ME Grown.**

497C Silver Cloud Crabapple on M111, $29.75

Sinai Sunset 15x12' (No. B-3) *M.* Amberina x *M.* Aloise. Fiala intro, Falconskeape, Medina, OH, 1990. Large brilliant single pinkish-purply-red flowers, each with golden anthers, resemble the setting sun viewed from the peak of one of the more famous and spectacular locations in the world. They are that nice. Spreading open horizontal tree habit. Introduced the year of John Fiala's passing. Reddish-green foliage. Dark red 1/2" persistent fruit. Disease free. Z4. **ME Grown.**

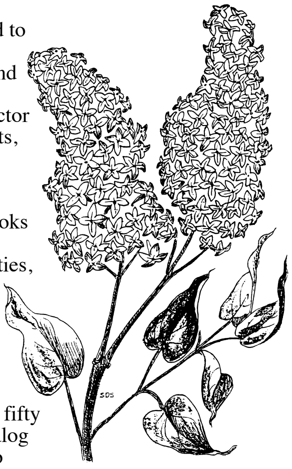
498C Sinai Sunset Crabapple on M111, $29.75

Snowdrift 20x20' Unknown parentage and origin. Cole Nursery intro, Circleville, OH, 1965. Pink buds followed by single brilliant white flowers. When you see this snow storm on a tree out in your yard on a blue sky day in May, you can smile about the winter finally passed. Fiala calls it "outstanding in bloom." We agree. Glossy green foliage. Orange-red 1/2" persistent fruit. Rounded upright tree form. Highly recommended despite slight scab and fireblight susceptibility. Z4. **ME Grown.**

499C Snowdrift Crabapple on M111, $29.75

Father John L. Fiala

All those who love lilacs or crabapples are bound to discover Father Fiala (1924-1990). He spent his life studying, breeding and writing about lilacs and crabs at his farm in Ohio. In his spare time, Fiala was a parish priest, educator and a founding director of the International Lilac Society. His classic texts, *Lilacs: The Genus Syringa* and *Flowering Crabapples: The Genus Malus*, essential for breeders, students and enthusiasts, are the most comprehensive, enlightening and entertaining books on two of our most iconic plants. They include comprehensive descriptions of hundreds of varieties, profiles of breeders, lists of recommendations, botanical definitions, histories and more. The bios of the plant explorers who traveled the world are outstanding. For anyone interested in apples of any sort, his explanation of the taxonomy of the genus *Malus* is one of the best there is. For the plant breeder, he's got your next fifty years all mapped out. As we write the Fedco catalog each year we find ourselves regularly referring to Fiala's expertise.



As a breeder, Fiala introduced more than 50 lilacs and nearly 150 crabapples, many of which we've offered over the years. Lilac geeks will all recognize Atheline Wilbur, Marie Frances, Yankee Doodle and this year's Fedco Trees offerings, Albert Holden (**557A**) and Wedgwood Blue (**560A**). His most popular crabs include Full Sails, Madonna, Molten Lava, Purple Prince, Red Swan, and this year's Silver Cloud (**497C**) and Sinai Sunset (**498C**).

Sugar Tyme 18x15' *M.* 'Sutyzam' (Milton Baron No. 1) PP 7062. Milton Baron intro, Lake County Nursery, Perry, OH, 1988. Pale pink buds and very showy single white fragrant flowers cover the tree. Upright spreading roundish oval form. Half-inch red persistent fruit hangs until March. Green foliage. A very beautiful tree. Excellent disease resistance. One of the newer patented varieties that is worth planting in any yard. 1999 Michigan Growers' Choice Award winner. Z4. **ME Grown.**

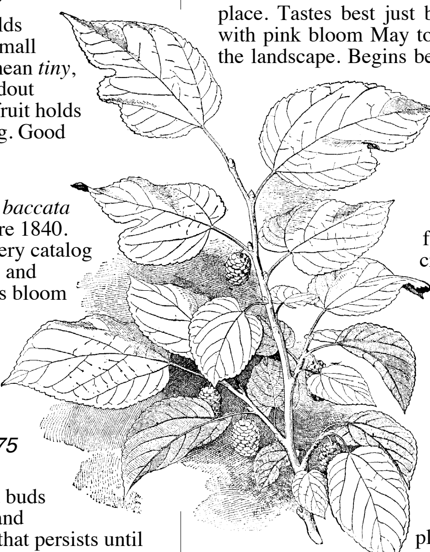
500C Sugar Tyme Crabapple on M111, $29.75

Tina 5-10' x 6-10' *M. sargentii* seedling. William McReynolds intro, Hook's Nursery, Lake Zurich, IL, before 1972. Very small horizontal Sargent crab selection, recommended for tina, I mean *tiny*, spaces. Pink buds and single white blooms, each with a standout yellow center. Very nice in bloom. Pea-sized red persistent fruit holds on until November. Medium green foliage. Annual flowering. Good resistance to scab and fireblight. Z4. **ME Grown.**

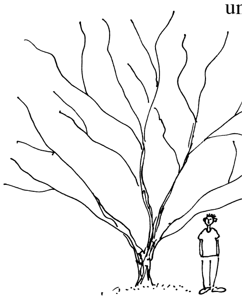
501C Tina Crabapple on M111, $29.75

Transcendent 20x30' Thought to be *M.* x *adstringens* (*M. baccata* x *M. pumila*). Europe, New York or New England well before 1840. First known reference appears to be the William Prince nursery catalog in 1844. One of the most famous of all American crabapples and certainly the one with the coolest name. White single flowers bloom with midseason apples. Red-blushed roundish 1½–2" fruit ripens in late summer. Tart, juicy and astringent, used traditionally for all culinary purposes and now becoming popular with cidermakers. Tree is large, wide spreading and somewhat weeping. Fireblight susceptible. Probably Z4. **ME Grown.**

502C Transcendent Crabapple on M111, $29.75



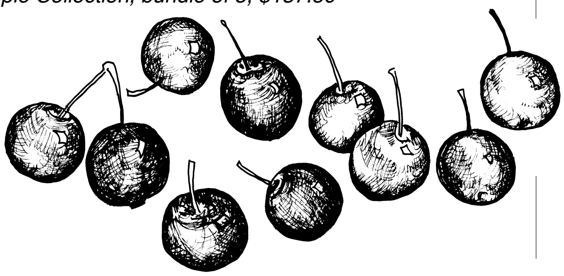
Winter Gold 25x20' Possibly *M. sieboldii* var. Zumi. SGA Doorenbos intro, The Hague, Netherlands, before 1947. Red buds and large single white flowers. Highly desirable for its rare and unusual brilliant yellow ½" fruit that persists until January. Considered one of the very best of the yellow- or gold-fruited crabs. Upright rounded vase-shaped spreading form. Green foliage. Highly recommended despite minor scab and susceptibility to fireblight. Used extensively in breeding new crabs. Fifteen of them appear in Fiala's *Flowering Crabapples*. Doorenbos himself was director of parks in the Hague. He also introduced two other outstanding crabs, Profusion and Liset. Z4. **ME Grown.**



503C Winter Gold Crabapple on M111, $29.75

Crabapple Collection An assortment of 5 crabapples selected by Fedco's John Bunker. Most will be from this year's catalog but a few rare surprises may be included. Rootstocks will be **semi-dwarf and standard**. Trees are individually labeled within each bundle.

509C Crabapple Collection, bundle of 5, $137.50



Make Space for Native Plants We love incorporating native plants back into the landscape. These plants are attractive, natural and beautifully suited to our growing conditions. They are also the best food sources for our butterflies, bees and other wildlife. Here are some you'll find in our catalog:

Amelanchier
Bayberry
Bearberry
Birch
Blackberry
Black Cohosh
Highbush Blueberry
Lowbush Blueberry
Butterfly Weed
Carolina Allspice
American Chestnut
Chokeberry
American Cranberry
Highbush Cranberry
Pagoda Dogwood
Redosier Dogwood
Silky Dogwood
Dutchman's Pipe
Echinacea
Elderberry
American Elm
Balsam Fir
Foxglove
Wild Ginger
Goldenseal
Grape
Hazelnut
Honeylocust
Hophornbeam
Blue Flag Iris
Jack-in-the-Pulpit
Lingonberry
Lobelia
Sugar Maple
Mockorange
Mulberry
Nannyberry
Northern Wild Raisin
Oak
White Pine
Beach Plum
Raspberry
Redbud
Spicebush
Spruce
Alpine Strawberry
Walnut
Winterberry
Witch Hazel
Yarrow

***Mespilus germanica* 'Breda Giant' Medlar** 12-20' Introduced in the Netherlands. Cinnamon-flavored spicy pear-like fruit shaped like a large rose hip, just under 2" in diameter. Good eating when ripe, thin-skinned with applesauce-like texture. Fruit cultivated in Europe and England since the Middle Ages or earlier, and still considered a culinary delight. One source recommends roasting in butter with citrus slices. Also makes good jelly, paste, chutney and "cheese." Fruit is hard when harvested after the first hard frost and must be bletted—allowed to ripen for several weeks in a cool place. Tastes best just before it turns mushy. 1–2" white flowers blushed with pink bloom May to June. Shiny green waxy leaves, a nice addition to the landscape. Begins bearing fruit 2–3 years after planting. One tree could bear 20 lbs of fruit once established. Plant in well-drained fertile soil, 9–10' from other trees. Full sun. Native to southeast Europe and Iran. **Self-fertile**. Z4/5. **ME Grown.** (2-5')

510A Breda Giant Medlar, $29.75

***Morus alba* x *M. rubra* 'Illinois Everbearing' Mulberry** 30x20' White County, IL, 1947. Sweet flavorful purple-black 1" blackberry-like fruit is delicious fresh, in sauces, pies, fruit leather or smoothies. What fruit you don't pick, the birds will. Great tree for viewing a huge variety of birds up close. Plant it next to the chicken pen where it will rain chicken feed into the yard for several weeks, or put down a sheet to collect the fruit as it falls. Dense round-topped tree is one of the last to leaf out in the spring and one of the first to set fruit. Ripens in mid-July and continues for several weeks into late summer. Fast growing, even in poor soils. Prefers moist well-drained soils but otherwise adaptable. Full sun to partial shade; withstands pollution, drought, wind and salt. **Self-fruitful** grafted cultivar, so only one plant required for fruit. Z4/5. (2-5')

511A Illinois Everbearing Mulberry, $31.25

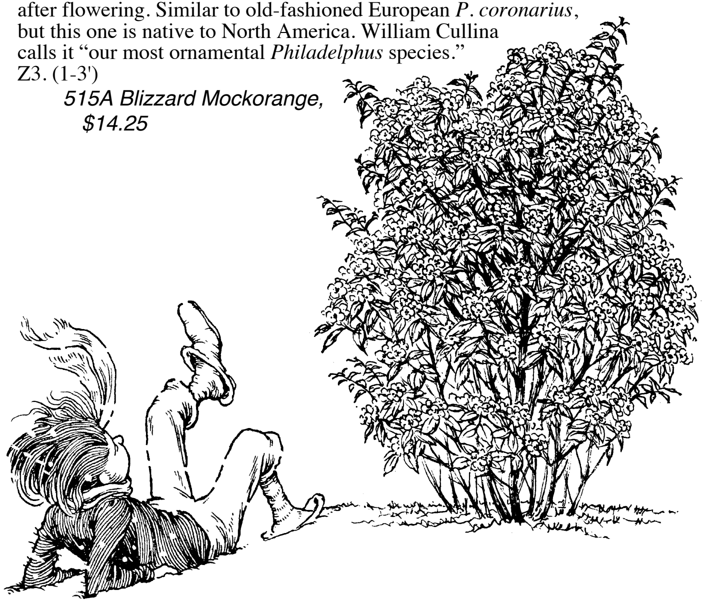
***Myrica pensylvanica* Bayberry** 5-10' x same. A common sight along Maine's rocky shores. Glossy leaves are highly aromatic, although not to be confused with the Mediterranean bay leaf in your spice collection. Small greyish-blue waxy fragrant berries were historically used for making candles. Non-showy flowers appear in late spring followed by fruit production along the stems of female plants during summer into late fall. Plants feed numerous wildlife species and are especially craved by swallows. Rounded deciduous semi-evergreen very salt-tolerant shrub thrives in full sun to partial shade, and in sandy poor soils to heavy clay soils. Excellent in masses or hedges, tends to sucker. Fixes nitrogen. Tends toward being dioecious: **male and female plants required for good fruit development**. We're offering unsexed plants; plant several if you desire fruit. Native to eastern U.S. Z2. (1-3')

514A Bayberry, $15.00

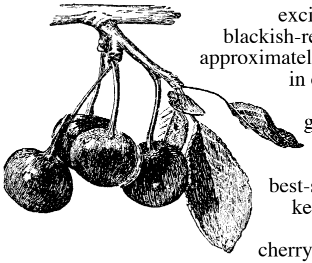
514B Bayberry, bundle of 5, $65.00

***Philadelphus lewisii* 'Blizzard' Mockorange** 4-5' x 3-4' COPF intro, Alberta, Canada. Medium-sized coarse upright loosely arching ornamental blooming shrub. A "blizzard" of sweet citrusy fragrance from pure-white slightly cupped 4-petaled blossoms for up to four weeks in late spring, after the lilacs fade. A spray of golden yellow anthers attractive to bees and butterflies accents each flower. Species was named after Meriwether Lewis who noted it in 1806 during the Lewis and Clark Expedition. Prefers moist rich well-drained soils but will grow well in most conditions. Full sun to partial shade. Since blossoms form on prior year's growth, best to prune after flowering. Similar to old-fashioned European *P. coronarius*, but this one is native to North America. William Cullina calls it "our most ornamental *Philadelphus* species." Z3. (1-3')

515A Blizzard Mockorange, $14.25



***Prunus* x *kerrasis* 'Carmine Jewel' Dwarf Sour Cherry** About 6-7' x same. Midsummer. U Saskatchewan intro, 1999. Crosses between sour and Mongolian cherries are causing a great deal of excitement in fruit-growing circles. Delicious blackish-red fruits with dark flesh and small pits are approximately the size of small sour cherries and ripen in early July. Good for both fresh eating and processing. Some growers have reported getting 20–30 lbs per bush after 3–5 years. In our trials we saw fruit after only three years and have found Carmine to be the best-suited for our climate. Compact plant size keeps the fruit within reach and makes it far easier to net against birds than a standard cherry tree. Prefers full sun and decent soil with a pH of about 6.5. Pamper them with mineral amendments and compost. **Self-pollinating**. Rare. Z3. **ME Grown.** (1-3')



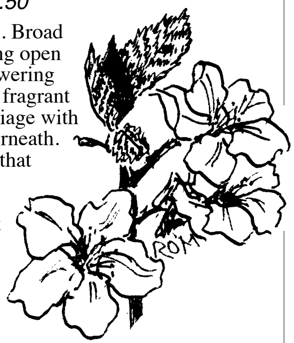
516A Carmine Jewel Dwarf Cherry, $21.00

***P. maritima* Beach Plum** 6' x 5-6' Rounded dense suckering shrub found along ocean beaches, New Brunswick to the Carolinas. In spring beautiful showy white blooms cover the dark branches. Purplish-red 1/2–1" fruit in late summer. Excellent jams, sauces and especially jelly. Although typically found growing naturally in poor sandy soils, the plants thrive in well-drained fertile soils with a pH of 6–6.5. Additional fertilization will further increase productivity. We suggest an annual 5-gallon bucket or two of compost per plant. Prune to maintain an open center for good light penetration. Plant about 5' apart. Pollination requirements are uncertain—we recommend planting **at least two for good fruiting**. Salt tolerant! Native to eastern U.S. Z3. **ME Grown.** (1-3')

517A Beach Plum, $15.00

517B Beach Plum, bundle of 5, $67.50

***P. tomentosa* Nanking Cherry** 6-10' x same. Broad dense highly ornamental fruiting shrub, becoming open and attractively irregular. One of the earliest flowering fruits every spring. Pink buds open to masses of fragrant white 3/4" flowers. Deeply veined light green foliage with very fine fuzz (tomentum) lining each vein underneath. Excellent hedge plant: an edible landscape crop that produces a lot of fruit that actually *is* edible! Variable 1/2" fruit in early summer ranges in flavor from mild to tart and in color from scarlet to clear red to pink and sometimes even white. Eat fresh or frozen. Excellent jelly and fruit leather. Said to make a good pie but pitting would require quite a bit of work. Covering plants with netting will deter birds from robbing your crop. Prefers full sun in well-drained soil. **Plant two or more for pollination.** Native to China and Japan. Z2. (1-3')



518A Nanking Cherry, $14.50

***Rhus aromatica* Fragrant Sumac** 5-6' x 6-8' Low irregular fast-spreading shrub with glossy blue-green trifoliate leaves that emit a musky aroma when crushed. Beautiful small bright yellow flowers in spring. Small red fuzzy fruit clusters on females. Attracts birds and butterflies. Leaves turn orange to brilliant scarlet in fall. Pubescent stems. Suckers from the roots. Branches touching the ground will root themselves. Quickly produces a colony; thus, useful in erosion control on banks or hillsides. Dioecious: these are unsexed plants; multiples needed for fruit. Easy to transplant, adaptable, prefers acid soil, sun to partial shade. Native to eastern U.S. Z3. **ME Grown.** (2-4')

519A Fragrant Sumac, $15.00

519B Fragrant Sumac, bundle of 5, $65.00

Special Plants for Challenging Locations

Drought Tolerant:
- Amelanchier
- Bayberry
- Bearberry
- Lowbush Blueberry
- Carolina Allspice
- Catmint
- Cornelian Cherry
- Chestnut
- Elm
- Grape
- Hawthorn
- Heather
- Hens & Chicks
- Honeylocust
- Hophornbeam
- Lavender
- Lilac
- Lingonberry
- Peashrub
- Beach Plum
- Rosa Rugosa
- Spruce

Wet Tolerant:
- Amelanchier
- Birch
- Black Cohosh
- Highbush Blueberry
- Chokeberry
- American Cranberry
- Highbush Cranberry
- Dawn Redwood
- Redosier
- Elderberry
- Elm
- Ferns
- Blue Flag Iris
- Lobelia
- Marshmallow
- Northern Wild Raisin
- Spicebush
- Turtlehead
- Willows
- Winterberry
- Witch Hazel

Shade:
- Black Cohosh
- Bloodroot
- Clematis
- Pagoda Dogwood
- Dutchman's Pipe
- Ferns
- Balsam Fir
- Wild Ginger
- Goldenseal
- Hazelnut
- Hops
- Hosta
- Jack-in-the-Pulpit
- Lady's Mantle
- Sugar Maple
- White Pine
- Pulmonaria
- Spicebush
- Trillium
- Blue Leaf Arctic Willow
- Wintergreen
- Witch Hazel

***Rosa* Rose** For millennia, roses have beguiled humans. The first cultivation of these flowers dates back more than 5000 years in China. Fossil records suggest that roses may have been around for more than 30 million years. Regarded as the ultimate icon of love, grace, beauty and elegance, roses continue to be the subject of art and poetry across the world.

Roses have long been used in medicine, food, tea and perfumery. In the first century, Pliny the Elder recorded more than 30 uses of rose medicine. Leaves, petals, hips and roots all have medicinal properties to treat a range of disorders from wounds to stomach problems. Rose hips are rich in vitamin C and make a wonderful "rose apple" jam; rose-petal elixir calms the nerves and lifts the spirit.

Each year, we aim to offer a diverse selection of unusual and antique varieties. If your favorite is not on the list this year, we may offer it in the future. Unlike hybrid tea roses, these roses are all vigorous, cold hardy and on their own roots rather than grafted. The antique varieties grow slowly compared to newer hybrids and tend to be more difficult to propagate. You may notice that some of these roses have small root systems and little top growth. Don't be put off by their small size—it's just the nature of these old varieties. We can attest that they perform just as well as the others. Native to temperate regions throughout the world. (9-18", except where noted)

***R. alba* 'Maiden's Blush'** 5-6' x same. France, 15th c. In France this ancient rose was called Cuisse de Nymphe, but when brought over to Victorian England, the name swiftly changed to a more modest Maiden's Blush. Highly fragrant 3" double very pale pink-blushed flowers bloom profusely end of June to early July. Elegant flowers are so light in color they are close to being white. Loosely arranged petals, sometimes more than 200 on a single flower. Jen's all-time favorite rose. Rose propagator Bob Osborne of Corn Hill Nursery in New Brunswick says, "I can think of no other rose with such an intoxicating aroma, such sensuous color or perfection in form." Upright spreading structure. Rough blue-green foliage sometimes shows signs of blackspot but otherwise healthy. Z4.

520A Maiden's Blush Rose, $17.50

***R. a.* 'Maxima'** 6-8' x same. Possibly *R. canina* x *R. gallica*. Europe, probably 15th c. or earlier. Archetypal *alba*, painted for centuries in Europe, also known as Jacobite Rose. One of the oldest roses in the world, used extensively for hybridizing many varieties. Very fragrant 3" creamy white ruffled double flowers bloom profusely in mid-late June. Upright stems consist of 6–8 blooms and can be trained to climb. Truly stunning. Disease resistant coarse grey-green foliage. Sometimes produces small hips. Z4.

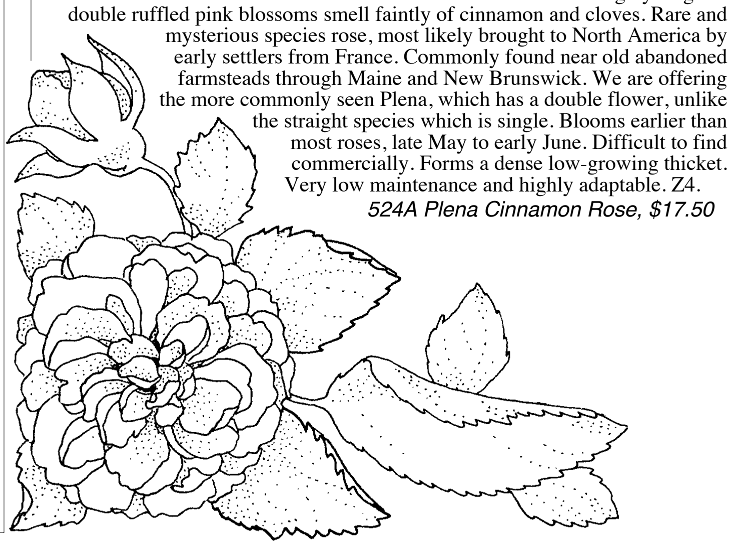
521A Maxima Rose, $17.50

***R.* 'BAIset' Sunrise Sunset** 2-4' x 3-5' Easy Elegance intro, 2005. Semi-double multicolored 2" flowers blending fuchsia at the petal edges to apricot in the center. A charming low-maintenance rose spattered with vibrant clusters of blooms May through September. No deadheading or fussing with sprays, blue-green foliage is disease resistant. Just plant it and watch it bloom! Vigorous spreading nature makes this rose ideal for brightening up shrub borders and mass plantings. Attracts butterflies. Drought tolerant. **PVP**. Z4.

523A Sunrise Sunset Rose, $17.50

***R. cinnamomea* 'Plena' Cinnamon Rose** 4-6' x same. Highly fragrant double ruffled pink blossoms smell faintly of cinnamon and cloves. Rare and mysterious species rose, most likely brought to North America by early settlers from France. Commonly found near old abandoned farmsteads through Maine and New Brunswick. We are offering the more commonly seen Plena, which has a double flower, unlike the straight species which is single. Blooms earlier than most roses, late May to early June. Difficult to find commercially. Forms a dense low-growing thicket. Very low maintenance and highly adaptable. Z4.

524A Plena Cinnamon Rose, $17.50

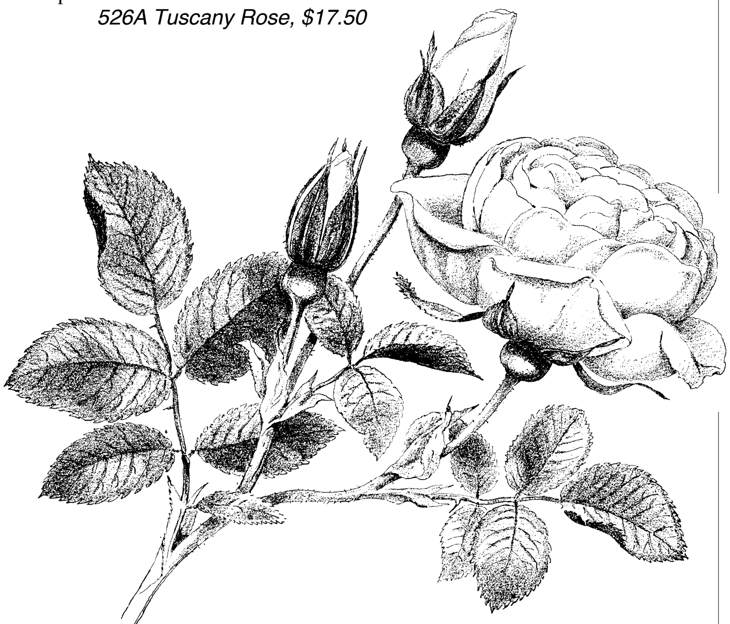


***R. gallica* 'Alain Blanchard'** 4-5' x same. Probably *R. centifolia* x *R. gallica*. Introduced by Jean-Pierre Vibert, France, 1839. Large fragrant semi-double deep crimson-purple petals surround distinct golden stamens. Flowers are slightly cupped and subtly mottled with lighter crimson. Two or 3 flowers per stem. Dark green dense foliage on thorny arching canes, best cut back or supported. Handles shade better than other roses though color may be less vibrant. Z4.

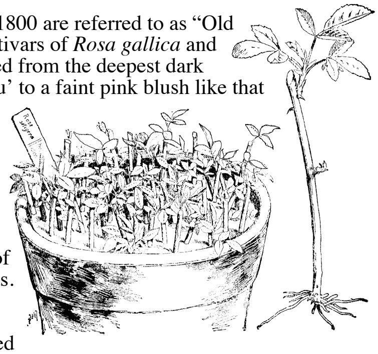
525A Alain Blanchard Rose, $17.50

***R. g.* 'Tuscany'** 3x2' One of the oldest *gallicas*; has been in cultivation since the 14th c. Often referred to as the **Old Velvet Rose**. Fragrant dark crimson double flowers are blushed blackish purple surrounding prominent golden-yellow stamens. This is the original Tuscany rose, which has fewer petals than its more commonly seen sport Tuscany Superba. Foliage is greenish-grey and rough in texture. Displays its strikingly dark aromatic flowers once each summer. Plant it nearby where it can be closely admired. Adaptable and needs little maintenance. Z4.

526A Tuscany Rose, $17.50



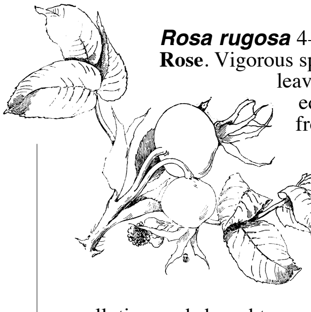
Old-fashioned Roses



Roses grown in Europe before 1800 are referred to as "Old World" roses, including the cultivars of *Rosa gallica* and *R. alba*. Their pink colors ranged from the deepest dark purple of 'Cardinal de Richelieu' to a faint pink blush like that of 'Chloris.' There were no reds among these antique roses and, though rich in fragrance, they bloomed only once per season. In the late 1700s red roses with repeat blooming tendencies were introduced from China, shifting the focus of rose breeding toward those traits. Demand for the aromatic and medicinal qualities of the Old World roses declined, supplanted by flowers that lasted long through the season. The hybrids created since the 1820s are called "modern" roses and are much more commonly seen in gardens today.

R. gallica is considered the oldest rose, steeped in history, legend and myth, and still grows wild in some places in the Caucasus, the mountainous region between the Black and Caspian seas, where it originated. Its exact origin is unknown but it can be traced back fourteen centuries when it was considered a symbol of love by the Persians. The aromatic petals hold their scent better than any other rose and have long been considered medicinal. This species contains hundreds of different cultivars, some very similar and others unique. Most have similar compact shrub habits and are generally very hardy. Most modern-day roses are presumed to be descendants of the *gallicas*.

The ***albas*** are almost as old as the *gallicas* and are also believed to have traveled west from the Caucasus with the Greeks and Romans. Many of the *alba* cultivars were bred in the 1800s in Europe. Though they flower only once, they should not be overlooked, as their beauty and fragrance are unparalleled by any modern rose. They are considered "tree roses" with tall canes that can be trained to fences, pillars and stonewalls, like climbers. Unlike many roses, ***albas* bloom on old wood**—if pruned too heavily, they can take years to flower again. Like heirloom apples, they are actually more disease resistant than many of the modern hybrids.



Rosa rugosa 4-6' x same. Also called **Japanese Rose** or **Beach Rose**. Vigorous spreading shrub with dark green wrinkled (rugose) leaves. Flowers range from deep pink to white. Large edible red hips up to 1" are good for jams, teas and fresh eating right off the bush. Deb Soule of Avena Botanicals uses rugosa petals in her much-loved Rose Petal Elixir. Considered by herbalists of Western, Chinese and Ayurvedic traditions to be rejuvenating and cooling. Blooms form on both old and new wood, so pruning necessary only to control size. Prefers full sun and well-drained sandy soil but also flourishes in fertile garden beds. Tolerates salt, pollution and drought; practically care-free. Although native to China and Japan and assumed to have been brought here by sailors long ago, there is now reason to believe that the rugosas may have been here for many centuries and may even be native. Z2. (1-3')

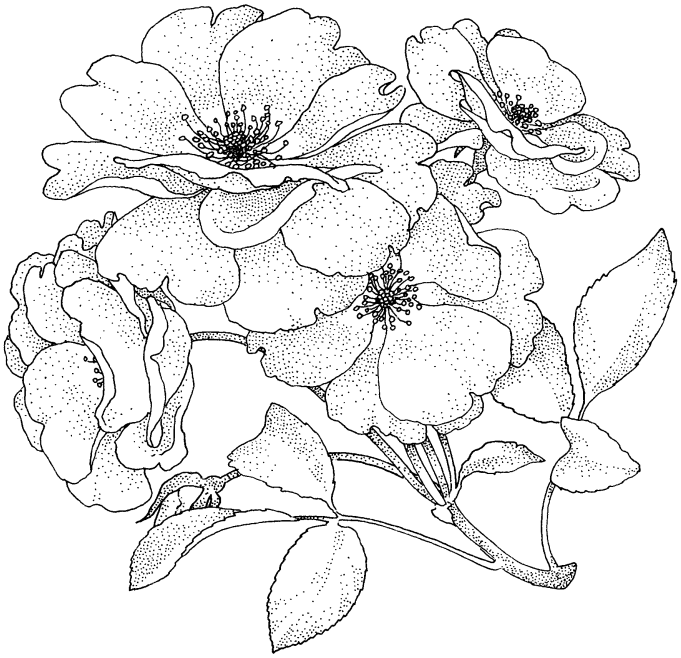
527A Rosa Rugosa, bundle of 5, $16.50

***R. r.* 'Dart's Dash'** 4-5' x same. *R. rugosa* hybrid, parentage unknown. Darthuis Nursery, Netherlands, date unknown. Semi-double very large 3–4" magenta flowers fill the air with a lemony scent. Blooms all summer and into fall. Creates a stunning hedge or border. Somewhat similar to Hansa but more compact and longer blooming. Terrific fall display of beautiful large orange-red edible hips that soften after a few light frosts. Bright green disease-resistant foliage turns orange in the fall. Full sun to part shade. Z2.

528A Dart's Dash Rose, $17.50

***R. r.* 'Linda Campbell'** 4-6 x 5-8' *R. rugosa* hybrid. Wayside Gardens intro, 1990. Bright crimson double 3"–wide blooms start in June and go all the way until frost. Reddish-green stems are covered in large clusters of true red flowers. Unscented. Dark grey-green semi-glossy foliage is disease resistant. Vigorous upright bushy habit perfect for hedges and shrub borders. Give it room to grow. Attracts butterflies. Z4.

529A Linda Campbell Rose, $17.50



Roses prefer full sun (at least 4–6 hrs per day) and a pH of 6.0–7.0. Space them 4–6' apart. They will do well in most well-drained soils with a good amount of organic matter. In locations with poor drainage, add gravel at the bottom of the planting hole, or build in drainage. Pick a site with good air flow, but avoid sites with cold northwest winds. Avoid competition with tree roots.

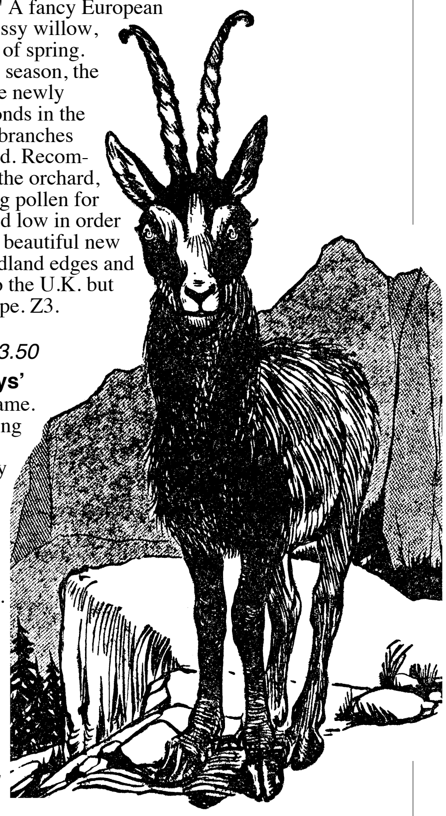
Plant roses as early as soil can be worked. Most roses' roots don't spread beyond the original hole, so dig a bushel-sized hole, as deep as 2' or more. We recommend lots of rotten hay in the bottom of the planting hole. Mix soil with liberal quantities of well-rotted manure and compost. Add a coffee-can full of rock phosphate or bone meal.

Soak roots in water overnight or up to 3 days before planting. Prior to planting, prune roses back to 3 canes, 2–5" tall. Plant them 1" below the level they were in the nursery. Add water as you fill in the hole to puddle it in. Mound soil around branches to prevent them from drying out, and to encourage buds to sprout. As the buds open, pull back the soil to the correct level.

Shrub roses and climbers will require little pruning in later years. Any pruning should wait until after the forsythia bloom. Remove dead or broken branches, and periodically cut out the oldest wood. Keep roses well mulched to retain moisture and reduce weeds. Add 2 shovelfuls of composted manure to each crown late in the fall.

Salix **Willow** The genus *Salix* comprises hundreds of different species of plants most commonly called willows but sometimes called **Osier** or **Sallow**. Willows grow all over the world. Some, like the weeping willow, are towering specimens. Others are short scrubby bushes—willows growing in the arctic can be 100 years old but only 2' tall! Uses include ornamental landscaping, shade, basket-making, erosion control, timber, fuel and medicine. All parts, especially the bark, contain salicin, used for relief of pain and fever for hundreds, or even thousands, of years. Aspirin is a synthetic analog of salicin. Willows feed local wildlife, insects and birds. We plant them near the orchard to provide early season forage for our native pollinators. All prefer sun and loamy wet soils, but are adaptable, easily transplanted and fast growing. (1-2')

Weeping willow can be found on p. 32.



S. caprea **Goat Willow** 20x12' A fancy European version of our common native pussy willow, *S. discolor*. One of the first signs of spring. On a dreary cold day during mud season, the light of an overcast sky makes the newly emerging catkins look like diamonds in the grey landscape. Cut early spring branches and put in a vase, no water needed. Recommended as a companion plant in the orchard, an excellent source of early spring pollen for winter-weary bees. Keep it pruned low in order to better reach—and enjoy!—the beautiful new stems in springtime. Prefers woodland edges and lowlands but adaptable. Native to the U.K. but long naturalized in much of Europe. Z3. **ME Grown.**

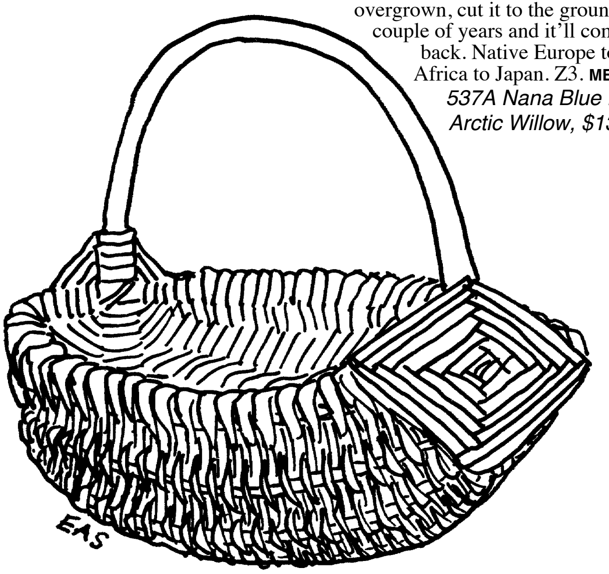
535A Goat Willow, $13.50

S. gracilistyla **'Melanostachys' Black Pussy Willow** 6-10' x same. Very attractive unique fast-growing plant for wetland areas. Deep purple-black male catkins in early spring; cut branches are marvelous for the dining table or kitchen windowsill. The rather short foliage emerges orange and then turns a deep green. Stems turn a rich purple-black in winter. Attractive dark colors all year. Winner of Royal Horticulture Society Award of Garden Merit. Prune in summer or fall. Adaptable. Prefers moist soil but will tolerate dry as well. Native to eastern Asia. Z4. **ME Grown.**

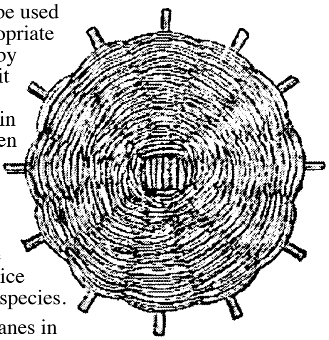
536A Black Pussy Willow, $13.50

S. purpurea **'Nana' Blue Leaf Arctic Willow** 3-5' x 3-6' Selection of Purple Osier. Medium-sized spreading shrub with small narrow blue foliage (actually greenish above and blue beneath) and delicate thin long red or green stems. The graceful thin stems sucker, layer and form a thick and highly attractive ornamental mass. Long cultivated and coppiced for a fine-textured basket-making material. Excellent bank or hedge plant, especially in wet areas but also quite suitable for a highly visible location. We've seen it looking great in a perennial bed. If it gets overgrown, cut it to the ground every couple of years and it'll come right back. Native Europe to North Africa to Japan. Z3. **ME Grown.**

537A Nana Blue Leaf Arctic Willow, $13.50



Grow your own basketry materials



Willow Many species of willow can be used for baskets. To see if a willow is appropriate for weaving, test a stem for pliability by slowly bending it all the way back. If it doesn't snap, it should be fine to use. Harvest non-branching leafless stems in winter. Store in a cool place to dry, then soak before using, which minimizes the shrinkage of the finished basket.

Redosier Dogwood Harvest non-branching stems in winter. Soak before using. Very flexible and can be used like basket willows. Provides a nice color contrast when paired with other species.

Blackberry, Raspberry Harvest canes in winter and scrape off the thorns with a thick piece of leather. Store in a cool dry place until you want to use them. Soak and weave like willow.

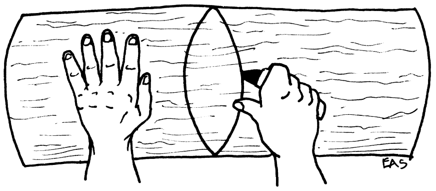
Grape, Honeysuckle, Kiwi Harvest vines in winter. Coil and store in a cool dry place until you want to use them. For best results, boil them for about 30 minutes to soften them up and to kill potential pests, then remove the bark (or don't!) before weaving.

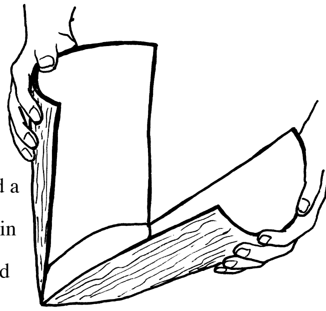
White Birch An important material for many indigenous cultures of North America and much of Europe and Asia. Birchbark can be used in both folded and plaited basketry. Can be sustainably harvested from living trees here in June when sap is still flowing. Experienced craftspeople can pop off the entire ring of outer bark without harming the cambium and girdling the tree, but it may be less stressful to the tree if you take a vertical strip from only one side. (Although the outer bark will grow back, it takes years and will be noticeably darker. You won't want to try this in a highly visible location, like a front yard.) Roll up and store the bark in a cool dry spot. Soak before using.

If you have to cut down a tree, consider making a basket:

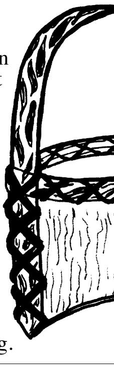
White Oak Though not widespread in Maine, it is a valuable splint basketry material, particularly in Appalachia. Cut a straight, 4–10" diameter tree (any time of year) to about 5' length, then split radially into sections until desired width is obtained. Splints are then split off along the growth rings, first with a froe and mallet, then by hand until thin enough for weaving.

Shagbark Hickory The inner bark is extremely sturdy and has a gorgeous undulating pattern. Harvest a tree in spring when the sap is flowing, and with a drawknife, shave off the outer bark to get to the inner bark. Slice up what you need, peel it right off the log, and hand split to a suitable thickness. It can be used for lashing, decorative basket rims and handles, and for weaving durable chair seats.

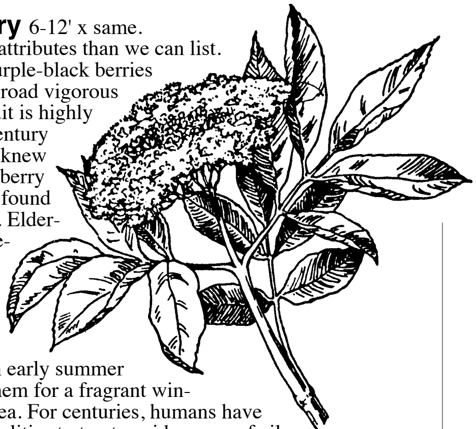




Pine, Cedar, Elm, Poplar Nearly any relatively smooth-barked tree can be used for folded-bark baskets. The tree must be freshly cut in springtime when the sap is flowing. Find a section free of branches and knobs, then remove the bark in a rectangular sheet. Lay flat with the outside facing up and use a knife to score an eye shape across the middle of the sheet, then flip over and carefully fold the sides up along those lines. Lash the sides together and add a rim and handle. You can also use fruit wood prunings if they are cut midspring when topwork grafting.



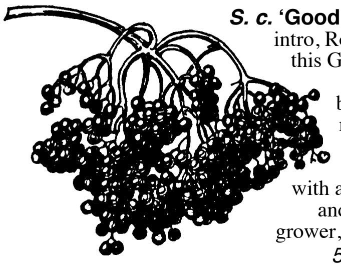
Additional tips Kiwi vines are less pliable but could add a decorative flair to your basket, especially around the handle or rim. A piece of Harry Lauder's Walking Stick could also make a funky handle! Conifer roots, especially spruce, are great for lashing rims in place. They can be dug in spring and summer, but don't overharvest the tree's roots. Strip the outer layer of the roots right after digging. Store in a cool place to dry and soak before using.



***Sambucus* Elderberry** 6-12' x same. This amazing plant has more attributes than we can list. Dangling clusters of edible purple-black berries ripen in late summer on this broad vigorous multi-stemmed shrub. The fruit is highly nutritious and medicinal. A century ago, everyone's grandmother knew how to make the perfect elderberry pie. Recipes for jam could be found in all the old farm cookbooks. Elderberries are making a big comeback as folks rediscover the scrumptiousness of elderberry jelly, cordial, elixir and wine. The large creamy-white flower clusters, or cymes, that cover the shrub in early summer make delicious fritters. Dry them for a fragrant wintertime cold-and-flu remedy tea. For centuries, humans have used this plant's medicinal qualities to treat a wide range of ailments and to boost the immune system. Hippocrates is said to have called the elder tree his "medicine chest." Birds love the fruit, and the blossoms attract beneficial insects and pollinators. Elderberry trees appear in myths from days of yore, thought to possess magical and protective powers. Elderberries are low-maintenance and easy to grow. With a little attention, they will provide strong yields of fruit for several decades. **Considered self-fertile but** multiple varieties or or even multiple species will improve fruit set. Z3. All are **ME Grown.** (1-3')

***S. canadensis* 'Adams No. 1'** NY Ag Exp Stn intro, 1926. Selected in 1915 from the wild by William Adams in Union Springs, NY, and sent to Geneva where it was introduced 11 years later. Large berries and fruit clusters make for easy and fast picking. If you're heading to a potluck and need to make a pie in a pinch, Adams is the shrub you want. Excellent for preserving and not bad fresh eating. Very large vigorous strong productive bush. Typically 7–8' tall.

541A Adams No. 1 Elderberry, $17.50



***S. c.* 'Goodbarn'** Chance seedling. Elwyn Meader intro, Rochester, NH. Professor Meader named this Goodbarn because it was the good elderberry growing under the eaves of his barn in New Hampshire. Another of the many fine plants that Elwyn's son John has brought to our attention over the years. Thanks, John! Hardy, vigorous with apparent self-fertility. It blooms heavily and produces large crops annually. Lower grower, maybe to 5'.

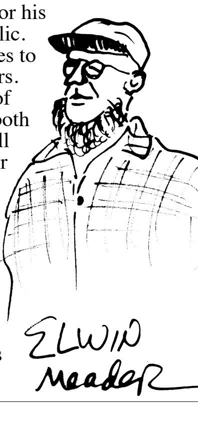
543A Goodbarn Elderberry, $18.00

Elwyn Meader: Plant breeder for the people

Reliance peach (**312A**), Meader blueberry, August Red raspberry (**342A**), Cocheco plum, Goodbarn elderberry (**543A**), Meader male kiwi (**389A**), John Viola grape…and the list goes on to include more than 60 selections of woodies and vegetables introduced by Elwyn Meader (1910-1996).

In 1941, Meader received his MS from Rutgers and became a horticulturist for the Department of Agriculture. In 1947, on a day off from duty while stationed in Korea, he and a friend went hiking in the Pouk Han Mountains. "On a cliff high above I spotted a lonesome, upright shrub, shoulder high, neatly ensconced in a wide crack of rock…As I examined its twigs and seed pods I knew it must be a lilac. Could the dried capsules still contain any seeds in such a windswept place? A diligent search rewarded me with a few, most had gone with the wind!" After he returned home a year later, Meader sprouted his seeds and from these came one of his most famous introductions, Miss Kim Lilac, named after the most common surname in Korea at the time.

He later became professor of horticulture at his alma mater, the University of New Hampshire in Durham. Many of his selections were released after his retirement, as he continued to breed plants on his farm in Rochester, NH. Meader never sought a single patent or royalty for his work. He believed his work belonged to the public. He encouraged people to save seeds and nurseries to focus on genetic diversity, not just the best sellers.



For many years, Fedco has had the privilege of working with Elwyn's son John, who has been both grower and consultant to us. The apple didn't fall too far from the tree. John continues to foster our horticultural education by bringing amazing plants to our attention and sharing with us his tricks of the trade. He attends our annual Tree Sale and graciously spends hours answering questions about blueberries, blackberries and just about anything in between. John seems to always arrive with potted gifts, some special plant he propagated and thought we should get to know. Our gratitude for the knowledge he has shared with us is beyond words.

ELWIN
Meader

***S. c.* 'Mattawamkeag'** Fedco intro, 2014. Selected and propagated by Sue Szwed and Mitch Lansky of Wytopitlock, ME. Sourced from a wide swath of plants growing between Wytopitlock and Bancroft in Aroostook County near the Mattawamkeag River. Sue and Mitch took cuttings from plants that are robust with consistently high fruit yields.

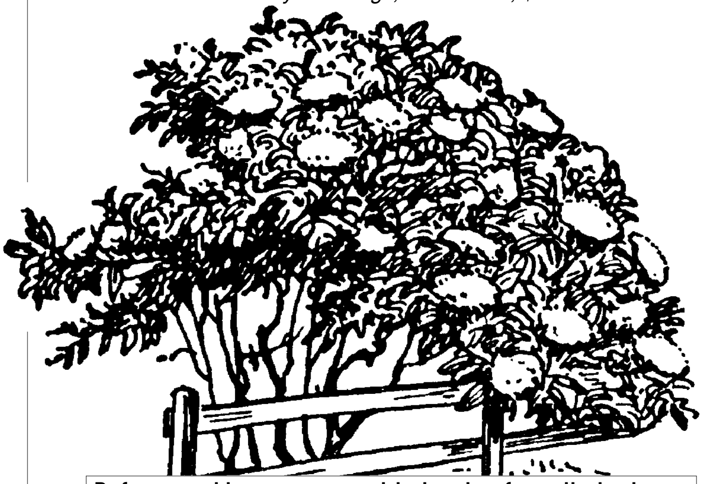
545A Mattawamkeag Elderberry, $18.00

***S. c.* 'York'** (Ezyoff x Adams No. 2) NY Ag Exp Stn, 1964. An old reliable, considered by some to be the largest-fruited and heaviest-bearing cultivar. In most of our Maine trials, this shrub is more compact than Adams, topping out at 4–5', but we've seen a 10' specimen growing on a compost pile. Persistent and will bear well for many years alongside other varieties. Heavy clusters of mildly tart large berries that ripen after Adams are easy to pick and excellent for jam, jelly, wine and pie. Bright green foliage on a rounded shrub.

550A York Elderberry, $17.50

***S. c.* Elderberry Seedlings** Each one is grown from cold-hardy seed and will be a totally unique plant. Some of our best plants grew from batches of such seedlings. Jen has one that outgrew all of her other elders and provided huge amounts of berries in its second year.

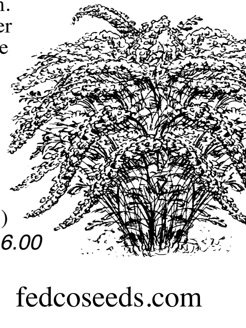
551A Elderberry Seedling, $17.50
551B Elderberry Seedlings, bundle of 5, $75.00



Before cooking, remove elderberries from their stems. This can be done while the berries are fresh or frozen. We pick and pack entire panicles of berries into plastic bags and put the bags in the freezer. Once frozen, remove and whack the bag with a stick. The berries will easily fall from the stems. Snip a hole in the corner of the bag and the berries will roll out. Freezing will not damage the fruit.

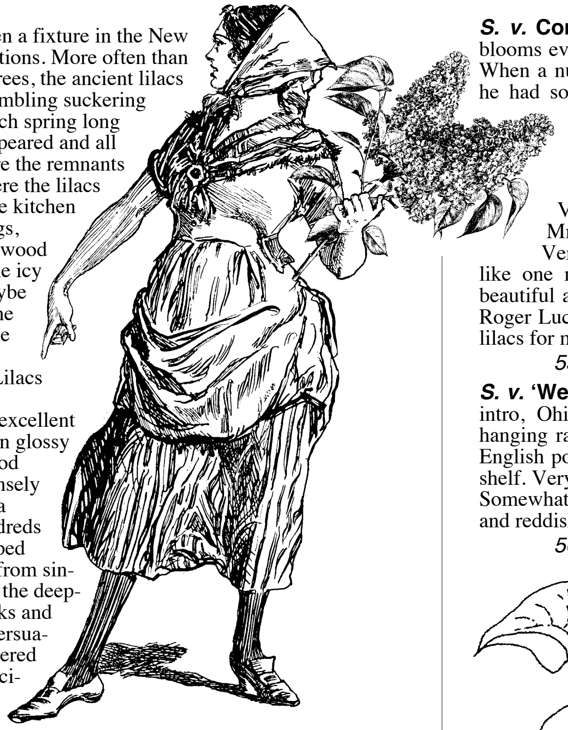
Elderberries are best grown in rich soil with a pH of 5.5–7.5 but are adaptable to a variety of soil types. They love compost! Add compost to the hole at the time of planting and every spring after that. They prefer moist soil but will tolerate poor drainage and temporary flooding. On the St. Croix River, we've harvested elderberries from the canoe! Plant in full sun. Susceptible to borers when weeds are allowed to crowd the base. Control weeds by mulching with a thick layer of hay, leaves or woodchips. Aggressive weeding around elders will disturb their shallow roots and risk injury to the plant.

Pruning for *S. canadensis*: in spring, while plant is still dormant, prune away any weak, broken or dead canes. New canes will emerge. Fruit is produced on both new and old wood but best sets are on one- and two-year canes. Periodically cut out the oldest wood. Alternately, some people prefer to cut elders back to the ground each year and treat them as perennials. The latter plants will produce fewer but larger fruit clusters. (*S. nigra*, which we sometimes carry, fruits on second-year wood.)



***Spiraea prunifolia* Bridalwreath Spirea** 5-9' x 6-8' Also called **Shoe Button Spirea** or **Popcorn**. This spirea looks like it came right out of grandma's side yard with its bright masses of double flowers that look like miniature white roses on long arching bare branches in early spring. Large graceful classic old-fashioned coarse open-vase habit. Some branch tips will touch the ground, so give it some room to express itself. Deep blue-green foliage emerges after the flowers blossom. Requires very little pruning although older plants can be rejuvenated by cutting to the ground following bloom. Like other spring-flowering shrubs, prune after it's finished flowering. Prefers full sun to partial shade, moist but well-drained soils. Not to be confused with Vanhoutte Spirea, also called Bridalwreath, which has clusters of single flowers on leafy branches. Native to eastern Asia. Z4. (1-3')

555A Bridalwreath Spirea, $16.00



***Syringa* Lilacs** have been a fixture in the New England landscape for generations. More often than not, when we find old apple trees, the ancient lilacs are not far away. The large rambling suckering shrubs continue to flourish each spring long after the buildings have disappeared and all that remains of homesteads are the remnants of stone foundations. Why were the lilacs always planted just outside the kitchen door? On cold winter mornings, someone would clean out the wood stove and sprinkle ashes on the icy path to the backhouse. Or maybe the path to the woodshed or the clothesline. Over the years, the earth outside the kitchen door became saturated with lime. Lilacs love alkaline soil.

In the landscape, lilacs are excellent alone or in hedges. Deep green glossy heart-shaped foliage looks good from spring through fall. Intensely fragrant blooms in May over a period of several weeks. Hundreds of varieties have been developed over the ages. Flowers range from singles to doubles, pure white to the deepest purple, not to mention pinks and reds and lavenders of every persuasion. Ornamental, edible (frittered flowers à la elderberry), medicinal, and a great Mother's Day gift. (1-3')

***S.* x *tribrida* 'Miss Canada'** 6-9' x same and spreading. *S.* x *josiflexa* 'Redwine' x *S. prestoniae* 'Hiawatha'. William Cumming intro, Morden Ag Res Ctr, Morden, Canada, 1967. Masses of deep red buds followed by lovely fragrant single pink blossoms after most other lilacs have faded. Every spring the *vulgaris* lilacs come and go. Days later I walk outside and am knocked back by a wonderful fragrance. "What?" Then I remember and look up. There is the deep pink—nearly red—Miss Canada greeting me as though saying, "And you thought lilac season was over!" Frequently recommended as one of the best of the unusual. The florets are unique in shape, clustering along the flower stem with spaces in-between. Outstanding plant. Z2.

556A Miss Canada Lilac, $16.50

***S. vulgaris* 'Albert F. Holden'** 7x8' 'Sarah Sands' x 'Reaumur'. John Fiala intro, 1981. Deep purple buds followed by fragrant showy two-toned single blooms: deep blue-purple backed by a light silver-lilac reverse. Each floret looks edged in silver as the petals curl slightly forward to reveal the color beneath. From a distance the entire upright rounded shrub with its loosely open panicles appears to shimmer in the sun. Unusual and exceptionally nice. Named for the founder of the Holden Arboretum in Kirtland, OH. Z3.

557A Albert F. Holden Lilac, $16.50

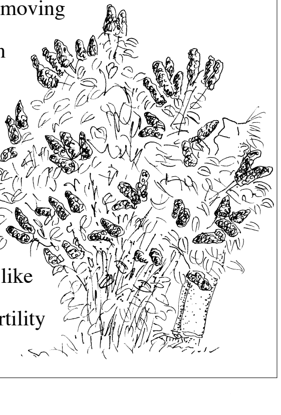
Lilacs are adaptable, easy to grow, nearly indestructible and practically maintenance-free. Plant them in a well-drained location in moderately rich soil. Sandy gravelly loam is perfect. They prefer at least 6 hours of sunlight each day. We suggest planting them with a shovelful of wood ash or lime, then add another shovelful of either every 3 years. A yearly mulch of manure or compost will encourage spectacular annual blooming. Pink, lavender and blue lilacs color up best in soil with a neutral pH.

How to prune lilacs

If you choose to prune your lilacs, do it right after flowering. Late-season pruning removes next year's buds. As the plant matures, prune off a quarter of the new suckers and the oldest growth (a few main stems each year). Some growers prefer to keep the plant low and bushy. Do so by "topping" it off every year: prune any upright branch back to a junction with a lower branch. Others prefer a tall tree-like form. Our friends Philippe and Danielle have let theirs soar to 8' or more, removing the lower branches and creating a magical walkway in the process. Lilacs are more than willing to cater to your own personal vision. Have fun! No need to cut off spent flowers except for appearance.

Why isn't my lilac blooming?

Too shady: lilacs need sun to form blossoms. Over-pruned: pruned too late, removed buds. Also, some plants respond to excessive pruning by putting their energy into vegetative growth instead of flowering. Too wet: lilacs like well-drained soil. Over-fertilized: lilacs will bloom well without assistance. Too much fertility can lead more vegetative growth and inhibit bud formation.



***S. v.* Common Purple** 12-15' x same. A mass of medium-light purple blooms every year. A magnificent New England sight for nearly 400 years. When a nursery friend looked out John's living room window and thought he had some fancy new cultivar, he chuckled, "Nope, just the good old common purple." Never disappoints. Suckers freely, the best lilac for a spreading hedge. Z2.

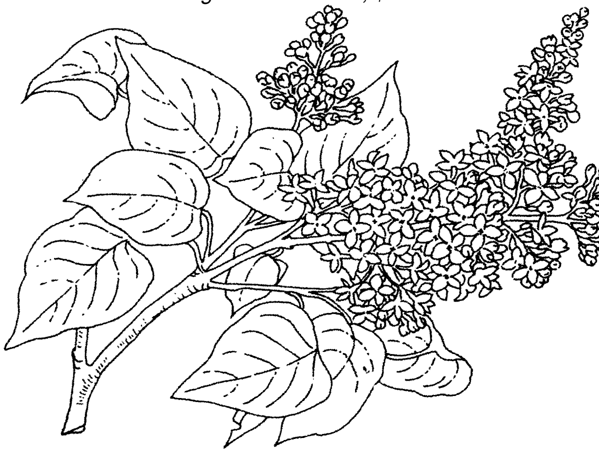
558A Common Purple Lilac, $16.50

***S. v.* 'Mme Lemoine'** 12x12' 'Marie Legraye' x open pollinated. Victor Lemoine et Fils, Nancy, France, 1890. It really is pure white. Mme Lemoine is the standard by which other white lilacs are judged. Very fragrant large double flowers in clusters so thick the shrub looks like one massive bloom. Open slightly wide-growing shrub. Provides a beautiful accent for the pinks and purples. A favorite of the late plantsman Roger Luce of Newburgh, ME, who maintained a magnificent collection of lilacs for many years. Z3.

559A Mme Lemoine Lilac, $16.50

***S. v.* 'Wedgwood Blue'** 6x8' 'Rochester' x 'Mrs. August Belmont'. Fiala intro, Ohio, 1981. Lilac-pink buds precede large beautiful wisteria-like hanging racemes of single blue blossoms. Named for the blue color in the English pottery you might have seen collecting dust on your grandmother's shelf. Very showy with a fine fragrance. Excellent for cutting. Upright form. Somewhat more modest in stature than most lilacs. Plant with deep purples and reddish magentas for stunning contrast. Z3.

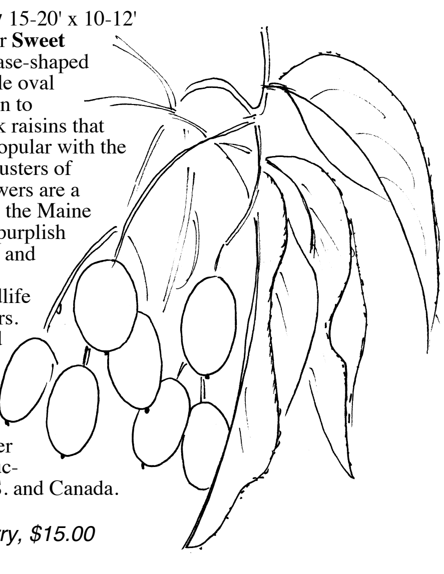
560A Wedgwood Blue Lilac, $16.50



***Viburnum cassinoides* Northern Wild Raisin** 5-6' x same. Also called **Appalachian Tea**, **Raisinberry** or **Witherod**. Rounded arching dense suckering native shrub. Creamy white flowers with yellow stamens on 2–5" flat-topped cymes bloom from spring to early summer. Highly desired for its multicolored edible fruit, which turns from green to pink to red to blue before finally turning black in September. One fruiting cluster may feature several colors at the same time. Best eaten when nearly dried out on the branch, if you can get to it before the birds! Foliage, once used in tea, emerges bronze or purple tinted, turning dark green when mature and then orange-red, dark crimson and purple in fall. *Withe* is from the old English meaning a tough, flexible twig used to bind things together. Witherod is pronounced *withe-rod*, not *wither-rod*. Good as a specimen but **plant more than one for fruit.** Sun to partial shade. Very rugged: adapts to dry or wet sites. Native to eastern North America. Z3. (1-3')

564A Northern Wild Raisin, $16.00

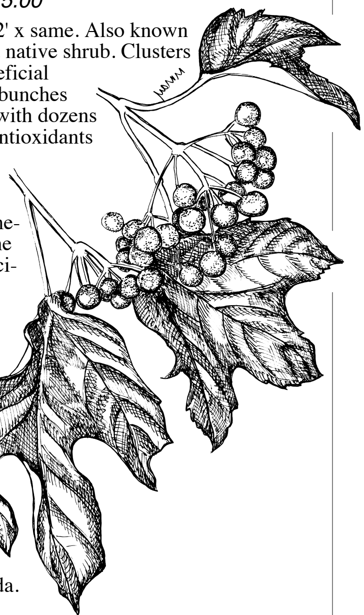
***V. lentago* Nannyberry** 15-20' x 10-12' Also called **Sheepberry** or **Sweet Viburnum**. Large open vase-shaped suckering shrub with edible oval berries that turn from green to yellow to red to blue-black raisins that persist in winter and are popular with the birds. Large flat-topped clusters of fragrant creamy white flowers are a common sight in spring in the Maine landscape. Shiny foliage, purplish red in fall. Medicinal bark and leaves. Recommended for naturalizing, bird and wildlife habitat, screens and borders. Prefers moist well-drained average soils but adaptable to poor, compacted or dry soils. Sun or shade. **Self-fertile, but** plant two or more for better pollination and fruit production. Native to eastern U.S. and Canada. Z2. (1-3')



565A Nannyberry, $15.00

***V. prunifolium* Black Haw** 12-15' x 8-12' Rounded flowering shrub, reminiscent of a wild hawthorn or crabapple in form. Suckering habit easily creates a dense colony or hedge, but can also be pruned to a multi-stem specimen if desired. Creamy white 2–4" cymes bloom in early spring while leaves are opening, providing an early source of pollen for dozens of different pollinators. Later in summer, 1/2" fruits turn from pink to dark bluish-black. The waxy-looking fruit hangs in clusters through the fall. Long used as a food source, eaten raw or put away in preserves. Root and bark traditionally used for medicinal purposes as a nervine tonic and antispasmodic. Dark lustrous green leaves turn to purplish-bronze in fall. Transplants easily and is very adaptable, moist to dry soil, sun or shade. Native to bogs and streams of eastern U.S. Z3. **ME Grown.** (1-3')

566A Black Haw Viburnum, $15.00



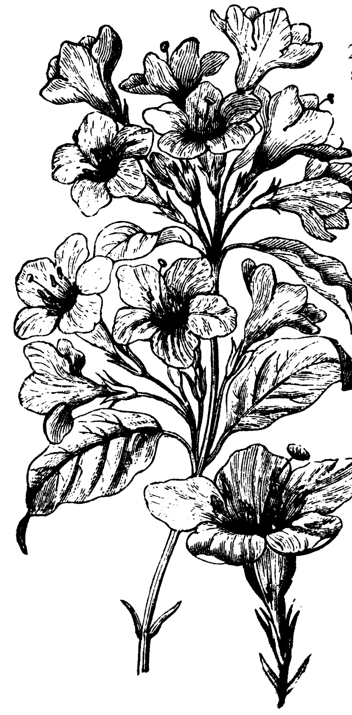
***V. trilobum* Highbush Cranberry** 8-12' x same. Also known as **Crampbark**. Medicinal multi-stemmed native shrub. Clusters of 4" flat white flowers in May attract beneficial insects. Quite lovely in bloom. Pendulous bunches of red berries ripen mid-October, popular with dozens of bird species. Fruit is extremely rich in antioxidants and vitamins A and C. Although considered a wildlife plant, berries can be used for juice, jam, fruit leather and syrups—when boiling them down, don't let the somewhat unpleasant odor deter you. Bark is one of the most effective anti-spasmodic medicinals. Harvest bark in April or early May before leaves emerge by running a sharp knife down the long younger stems. Make tea or tincture to relieve cramping and muscle tension of various sorts. Good for screens and hedges. Tolerates dry soils that are high in organic matter, but prefers rich moist well-drained soils, sun or shade. Soil pH 6–7. Susceptible to viburnum leaf beetle; check with your local extension office or nursery to determine if this could be a problem. Not the low-growing bog cranberry (see next page) familiar in sauces. Native to northeast U.S. and Canada. **Self-pollinating**. Z2. (1-3')

***V. t.* 'Wentworth'** Selected in the early 1900s for heavy fruit set. Named after O.E. Wentworth of Lancaster, NH, where the original shrub was found. Fruit ripens to vibrant scarlet red, slightly earlier than other *trilobums*. Leaves turn deep red in the fall, giving a lustrous autumn display.

567A Wentworth Highbush Cranberry, $15.50

***V. t.* Seedlings** Add to the biological diversity of your garden. No two seedlings are exactly alike. Not only is it fun and exciting to see what you get, it allows nature the opportunity to develop resistance and durability to insects and disease. **ME Grown.**

568A Highbush Cranberry Seedling, $15.00
568B Highbush Cranberry Seedlings, bundle of 5, $67.50

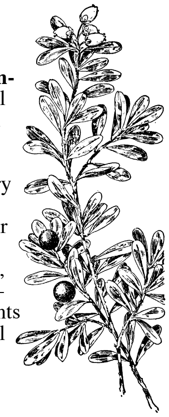


***Weigela florida* 'Tango' Weigela** 2x2 1/2' Complex cross. Weigela Dance series by Felicitas Svejda, Ottawa Exp Stn, Canada. Compact dense rounded slightly vase-shaped shrub that may arch to the ground. Purple yellow-veined new foliage turns greenish purple with maturity while retaining the yellow veins. Quite beautiful. 1" red tubular funnel-shaped flowers have yellowish throats and attract hummingbirds. Blooms for a month in late spring to early summer. Excellent in borders, in groups or as a specimen. Best blooms in full sun. Prefers soil well drained, but thrives in most conditions, city or country. Species native to eastern Asia. Z4, maybe Z3. (1-3')

573A Tango Weigela, $14.50

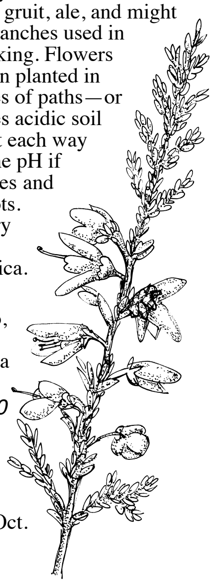
ME Grown = grown in Maine at one of our small local nurseries

Groundcovers



***Arctostaphylos uva-ursi* Bearberry** Also called **Kinnikinick**, **Hog Cranberry**, **Mealberry**, **Sandberry**, **Mountain Box** or **Bear's Grape**. Delicate low-growing beautiful glossy evergreen spreading groundcover. Beautiful in rock gardens. One plant can spread to 15'. Small pinkish-white flowers in spring. Leaves are diuretic, astringent and anti-bacterial. Used before modern antibiotics in treating urinary infections. Tea may also have value as a general tonic. Small bright red drupe-type berries color up in late summer and persist into winter. Too insipid for fresh eating, but often fried with fish. Prefers poor sandy infertile acid soils, tolerates salt. Can be sensitive to root disturbance, thus finicky in transplanting and may be slow to establish. Set plants 1–2' apart. No need ever to prune or fertilize. Sun or partial shade. Native to North America and Eurasia. **Self-pollinating**. Z2. **ME Grown.** (potted transplants)

L581A Bearberry, $15.00



***Calluna vulgaris* Heather** Magical, mythical and medicinal evergreen groundcover features a spread of flowers and foliage that change color throughout the season. Each year we vary our selection but always offer the hardiest varieties proven to flourish in northern climates. Revered in the British Isles, important medicinally in teas, honey, liniments and ointments. First fermented a few thousand years ago, used in gruit, ale, and might be the original ingredient for the first whiskey. Branches used in thatching, bedding, basketry, rope and broom-making. Flowers attract bees, butterflies and moths, especially when planted in masses. Recommended for rock gardens and edges of paths—or for opening the portals to the fairy world. Requires acidic soil and full sun to partial shade. Plant about 18" apart each way and let it spread. Mix peat into the soil to lower the pH if necessary—see planting instructions for cranberries and blueberries. Does not like high fertility or wet spots. Shear every April for best bloom. Native to the dry forests, heaths and bare grounds of Britain and Ireland. More recently naturalized in North America. Z4. (4" pots)

***C. v.* 'Corbett's Red'** 10x16" Bob Corbett intro, BC, Canada. Luminous pink-crimson flowers on upright spikes Aug.-Oct. Dark green foliage with a spreading habit.

L582A Corbett's Red Heather, $12.00

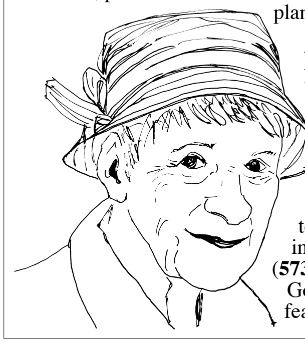
***C. v.* 'Kinlochruel'** 10x16" Sport of County Wicklow. Found by Brigadier EJ Montgomery in Argyll, Scotland. Double bright white flowers abundantly cover lustrous green foliage. Flowers start budding late June then gradually open Aug-Oct. Bronze tips in winter. Winner of RHS Award of Garden Merit.

L583A Kinlochruel Heather, $12.00

Felicitas Svejda: Radical Rosarian of the North

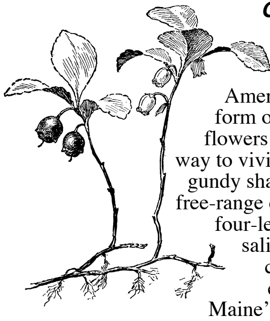
Born in Vienna, Austria, Felicitas Svejda (1920-2016) earned a PhD in engineering and agricultural science. In the '50s, Svejda (pronounced "SWAY-da") moved to Ottawa for a job at Agriculture Canada researching grains. When she got there, her superiors decided that cereal research was too important to assign to a woman and gave her statistics work instead. She transferred to ornamentals and was soon snagged, figuratively and perhaps literally, by a patch of roses at the Experimental Farm. She took up the extreme challenge of developing roses to withstand the cold Canadian winters and offer repeat blooms. She later wrote, "I knew nothing about roses. This was a blessing because I had no preconceived notion. I had to learn. The easiest way was by observation."

From her project emerged the Canadian Explorer Rose series, cultivars beloved in colder climates around the globe. These roses are truly amazing: they're low-maintenance, super-hardy, and make even the most negligent gardener feel successful. We've offered many in past catalogs. Deviating from the norms of the time, she took a natural approach to cultivation, letting insects do the pollinating (rather than doing it by hand), and rejecting fertilizers, pesticides and winter cover for her roses. She was not interested in plants that need pampering.



Svejda is considered by many in the trade to be the one of the best plant hybridizers in history. She's described by those who knew her as intense, extremely dedicated, meticulous, single-minded and brilliant. One friend said of Svejda, "She suffered no fools." She was deeply supportive of amateur horticulturists, sometimes paying them visits and sharing her techniques. Among a long list of hardy plant introductions, Svejda gave us Tango Weigela (**573A**) from the Dance Series and the Northern Gold Forsythia (**469A**), which we're happy to feature among this year's offerings.

More Groundcovers



***Gaultheria procumbens* Wintergreen** Also called **Eastern Teaberry**. Herbaceous aromatic rhizomatous evergreen groundcover native to the woodlands of eastern North America. Glossy dark green elliptic-to-oblong leaves form on erect stems. Nodding bell-shaped waxy white flowers bloom from the leaf axils in June. Flowers give way to vivid red berries. Leaves will take on beautiful burgundy shades in the fall. Excellent winter food source for free-range chickens, partridge, turkeys, and some two- and four-legged mammals. Fragrant leaves contain methyl salicylate, a potent external anti-inflammatory, and can be used to make a poultice or massage oil to ease arthritic pain and sore muscles. Designated Maine's State Herb in 1999. Plant 16" apart in dappled shade in moist but not boggy woodland soil. Grows 6–10" tall with a 1–3' spread. **Self-pollinating**. Z3. (nursery-propagated 3½" plugs)

L584A Wintergreen, $8.00

L584B Wintergreen, bundle of 3, $20.00

***Vaccinium macrocarpon* 'Stevens' American Cranberry** This is the cranberry of holiday sauces, bread and jelly. Dense low lustrous evergreen groundcover, reddish purple in fall and loaded with large red berries. Once established, makes a beautiful and edible "lawn." Handpick or rake like blueberries before hard frost. Use fresh, freeze or store in a cool basement or root cellar for months. Bitter and alkalizing effects make it one of the most common remedies for bladder infections. An excellent source of vitamin C. Annually flooded for frost protection and harvesting convenience in commercial operations, but not necessary in home plots. Adaptable to everything from bogs to dry rocky outcroppings. **Self-pollinating**. Native to northeastern U.S. and Canada. Comes in a bushy 6" clump which can be carefully divided or planted as a whole and divided in future years. Z2. **ME Grown.** (1-gallon pots)

585A Stevens American Cranberry, $20.00

American Cranberries are shallow-rooted and require light acid soil (pH 4.0–5.5), preferably cool, moist and high in organic matter, similar to soil in which blueberries grow well. Will grow in dry locations. Plant them in spring once the ground can be worked in a bed or in a naturalized setting.

We no longer recommend mixing in sulfur to acidify the soil. Sulfur is slow-acting and can be added to soil surface in subsequent years if necessary. Mixing it into the soil can damage tender young roots.

For a 5x5' bed (10 plants or divisions):

For acidic "blueberry" soils:

If you're fortunate to have a site where blueberries grow naturally, clear a spot of vegetation, cultivate the soil, add some peat and sand if you like, and you're ready to plant.

Sandy soils: Remove soil 10" deep and mix soil with 2 bales of damp peat moss. Replace mixture in bed and cover with 2" of sand.

Clay or silty soils: Remove soil 10" deep and place it around the edge of the bed as a berm. Replace the soil with a 50-50 mix of soil and peat (about 2 bales of peat). Cover with an additional 2" of sand. Plant cranberries 12" apart, so the roots are in the peat and the sand is covering the lower portion of the stems.

Remove all weeds as needed. Water the plants weekly so that the peat is moist but not saturated. Add nitrogen at a rate of ⅓–1 lb (or 20–50 lbs of manure) per 100 sq feet each year. No pesticides should be necessary.

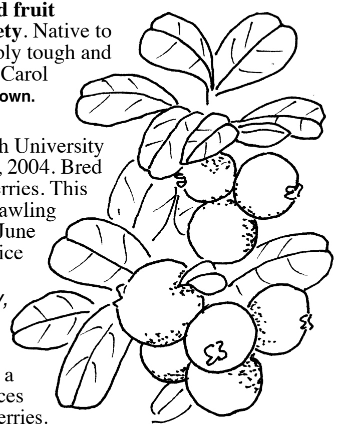
Handpick before first hard frost when berries are red.

In late fall, cover the bed to protect the plants from the drying effect of winter winds. Use a mulch of leaves or pine needles; or cover with polyester row cover and then clear plastic; or cover with row cover and then plenty of leaves. You may want to bait for mice under row cover or plastic.

Remove mulch in early April. Protect flower buds from 28° frosts by covering with plastic during frosty nights.

Every two years partially cover the plants with a ½–1" layer of sand in spring before growth begins. This will help produce more berries and keep weeds down.

***V. vitis-idaea* Lingonberry** Also called **Foxberry**, **Cowberry**, **Mountain Cranberry**. Vigorous shallow-rooted spreading groundcover is related to blueberries and cranberries. Bright red glossy nutritious fruits are slightly smaller than lowbush blueberries. Tart until dead ripe, then has excellent flavor, richer and less astringent than cranberries. Can be eaten fresh but primarily used in sauces, jams, syrups, fruit leathers, juices and wines. Stores up to 2 months in the fridge. Small shiny dark green foliage is quite lovely. Adorable tiny bell-shaped white flowers in spring attract a plethora of pollinators. Extremely popular in Scandinavia and now catching on in the U.S. If you've got good soil for blueberries, try these. Ripens in late summer but is best after a frost. Harvest by hand or with a blueberry rake. Will produce 1–2 lbs per plant depending on the variety and can produce for up to 20 years. Prefers full sun and poor sandy acid (pH 4.5–5) soils. Plant 12–18" apart in rows 3–4' apart. **To ensure good fruit production, plant more than one variety**. Native to the colder northern hemisphere. Incredibly tough and very hardy. Grown in Newport, ME, by Carol Armatis of 3B Apiary. Z2. All are **ME Grown.** (potted transplants)



***V. v.-i.* 'Balsgard'** 12-15" tall. Swedish University of Ag Sciences intro, Balsgard, Sweden, 2004. Bred for high yields of very large deep-red berries. This vigorous upright slow grower is less sprawling than other lingons. Produces flowers in June and again in September, so may fruit twice in one season.

L586A Balsgard Lingonberry, $16.75

***V. v.-i.* 'Erntedank'** Up to 12" tall. Albert Zimmer intro, 1975. Collected in a wild heath near Uchte, Germany. Produces heavy yields of small- or medium-sized berries.

L587A Erntedank Lingonberry, $16.75

***V. v.-i.* 'Erntesegen'** 12-15" Collected by Zimmer from a German heath. High-yielding upright plant produces very large berries. Slightly acid sweet fruit.

L588A Erntesegen Lingonberry, $16.75

***V. v.-i.* 'Linnea'** 12" Swedish U intro, 1999. Cultivar selected from an open-pollinated seedling of Sanna, a wild strain. Berries are smaller than other cultivars, but this heavy cropper with high vigor produces good yields. Bears in late September or early October.

L589A Linnea Lingonberry, $16.75

***V. v.-i.* 'Red Pearl'** 12-18" Elden Stang intro, Holland, 1983. Very adaptable fast-growing upright plant produces large berries. Somewhat lower yielding, but standard in commercial production as an excellent pollinator.

L590A Red Pearl Lingonberry, $16.75

***V. v.-i.* 'Red Sunset'** 8-15" Hartmann's Plant Co intro. Medium-to-large firm flavorful berries. Considered one of the most vigorous cultivars.

L591A Red Sunset Lingonberry, $16.75

***V. v.-i.* 'Regal'** 8-15" WI-108, Univ of WI intro, Madison, WI, 1994. From open-pollinated seed collected in southwest Finland. Highly ornamental upright plant produces firm small-to-medium berries with good flavor. Vigorous.

L592A Regal Lingonberry, $16.75

***V. v.-i.* 'Ruby'** 12" Also from the Swedish U program. Medium-sized light red berries ripen in October and last for weeks. Moderately vigorous with lots of spreading rhizomes.

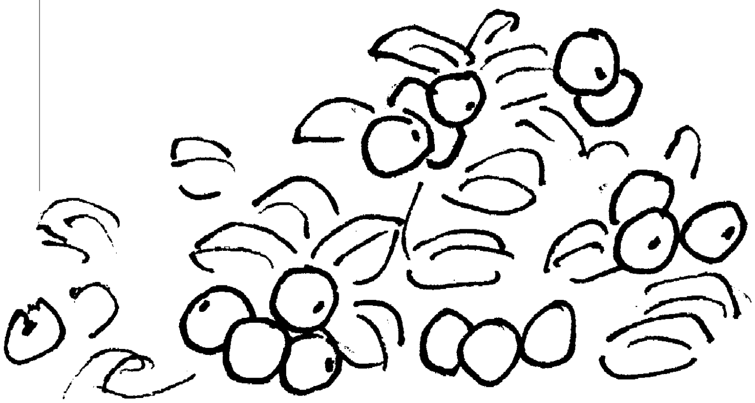
L593A Ruby Lingonberry, $16.75

***V. v.-i.* 'Sussi'** 4-8" Sometimes spelled 'Susi'. Patented by the Swedish Ag Dept, 1985. Tall and spreading vigorous bush with moderate yields of medium berries that fruit on branch tips. Great pollinator for other varieties. **PVP**.

L594A Sussi Lingonberry, $16.75

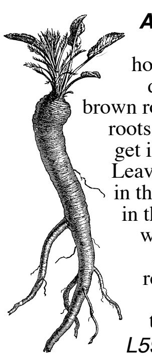
Lingonberry Collection Get your patch going and boost pollination with this collection of 5 plants, each a different variety chosen by Fedco.

597A Lingonberry Collection, bundle of 5, $70.00



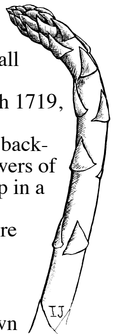
Garden Roots

No garden is complete without the classic triumvirate of Horseradish, Asparagus and Rhubarb!



***Armoracia rusticana* ‘Big Top’ Horseradish** Exceptionally vigorous perennial with large dock-like leaves and spicy hot roots, savored for centuries for their culinary and medicinal qualities. Horseradish tea is said to be an effective control for brown rot on stone fruit. Deep taproot with numerous shallow runner roots. Choose carefully where you plant it because you may never get it all out. Even the tiniest root piece will produce a new plant. Leaves can be cooked as greens. Roots are traditionally harvested in the fall, but you can dig them anytime. Roots keep 3–4 months in the fridge. To use as a stimulant, grate the fresh roots and mix with a little lemon juice or apple-cider vinegar and refrigerate. Use soon, then make more. Big Top is an especially disease-resistant variety. Prefers moist rich soil. Plant with the slanted cut down and the flat side up, or just toss them in and watch them grow. Native to northern Europe. Z3. (roots)

L598A Big Top Horseradish, bundle of 5, $18.00



***Asparagus officinalis* Asparagus** A spring staple for millennia, may have originated around the Mediterranean Sea, perhaps in Asia Minor. The pharaohs, Greeks and Romans were all aware of its highly nutritious qualities and delectable flavor. The earliest known American horticultural advertisement, from March 1719, is for “English Sparrow-grass Roots.”

Uncut shoots become a light green feathery hedge, a beautiful backdrop to a flower garden. Honeybees love the dainty dangling flowers of asparagus. Occasionally non–spear-forming females will show up in a planting. Leave them be or rogue them out as you wish.

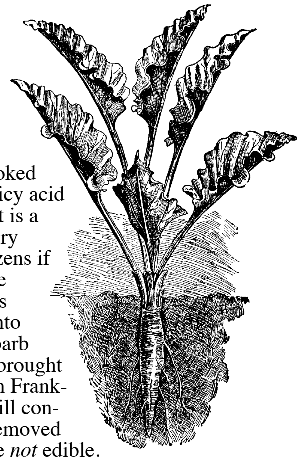
John visited friends who added Biochar to their soil. Wow, were their roots beefy! (large-rooted 1-yr crowns)

***A. o.* ‘Jersey Supreme’** Early. Rutgers U. release in 2000, All-male hybrid that is more productive than the older all-male varieties. Excellent tolerance to asparagus rust and fusarium crown rot. Produces high yields of large-diameter tender spears in spring. Z4.

L599A Jersey Supreme Asparagus, bundle of 25, $25.00

***A. o.* ‘Purple Passion’** Early. Developed from the Italian heirloom Violetto di Albenga. Brian Benson intro. Very large deep purple stalk with a creamy white interior. Purple asparagus is actually a type of white asparagus shown the light. Sweeter and less stringy than its green counterparts, so you can use more of the spear. Tender enough to eat raw in salads. Turns green when cooked. Z4.

L600A Purple Passion Asparagus, bundle of 25, $25.00



***Rheum rhabarbarum* ‘Victoria’ Rhubarb Seedlings** Joseph Myatt intro, Manor Farm, Deptford, England, 1837. Heirloom variety. Named to honor the Queen, it was considered to be the most important rhubarb variety of the 19th c. Famous for early summer pie and wine, but also good in sauce, bread, juice, soup or cooked with meat and fish. Rhubarb’s clumps of juicy acid leaf stalks were once a staple food. The root is a toning purgative herb traditionally used every spring for thousands of years. There are dozens if not hundreds of rhubarb varieties. May have originated in Siberia and been carried across Asia on the Silk Road to Turkey and then into Europe. Victorian cookbooks included rhubarb compotes, fools and charlottes. Eventually brought to North America through the efforts of Ben Franklin and John Bartram. Low-maintenance, will continue through summer if flower stalks are removed and new leaves allowed to grow. Leaves are *not* edible.

From our trials, we’ve learned that rhubarb rarely comes true to type when grown from seed, a fact often undisclosed in the nursery trade. We are offering seedling crowns grown by organic farming practices at Villageside Farm in Freedom, ME. There will be variation within the crop. Some stalks will be green with deep red bases and others will be solid green or splashed with red. All are vigorous and delicious, and we’ve enjoyed them in our pies, wines and sauces. Z3. **ME Grown.** (divisions)

L602A Victoria Rhubarb Seedling, $12.00

Asparagus

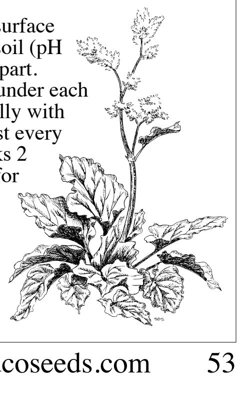
Plant when you receive your order or as soon as the ground can be worked. Requires fertile soil with pH 6.8–7.2 and high levels of phosphorus. Plant 14–18" apart, 6–10" deep, in trenches 4' apart. Or dig your trenches somewhat deeper and fill the bottom with 4" of compost and rotted manure. Lay plants with crown up and cover with 2" of soil. Plants emerge very slowly. As young shoots grow, add soil gradually, just covering the shoots, until the trench is full. In late fall, remove dead stalks and mulch with 3" of manure.

Second summer: Add lime, rock fertilizers and compost as needed. Control weeds but do not injure crowns.

Later years: Same routine but increase fertilizer. Be sure to leave some spears each year to grow stalks that will nourish the roots and give you more spears next year. Keep the bed weed-free and mulched heavily.

Harvest: New research shows that asparagus can be selectively harvested for 2 weeks during the second growing season, for 4 weeks in the third, and a full season thereafter. We recommend caution in harvesting too much too soon. Before the third or fourth season, harvest only the largest shoots from vigorous plants so the young plants can establish themselves.

Rhubarb



Plant the top of the root division level with soil surface in well-prepared well-drained rich slightly acid soil (pH 5.5–6.5). Space crowns 2–4' apart in rows 3–4' apart. Add a bushel of well-rotted manure or compost under each crown. When plant is established, fertilize liberally with manure and balanced garden fertilizer or compost every spring, as it’s a heavy feeder. Harvest for 4 weeks 2 years after planting. Thereafter you can harvest for 8–10 weeks each year. Never remove more than 2/3 of the stalks from a plant. Water during dry spells for extended season.

Every 10 years or so, divide plants in early spring, leaving about 1/3 of the crown in place. Cut up the remainder into fist-sized pieces and replant.

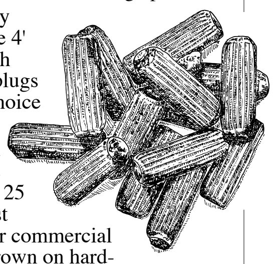
Mushroom Spawn

Many of us are crazy about mushrooms. We love hunting for them in the damp forests during spring and fall, cooking them, tincturing them or just admiring their mysterious beauty. People have cultivated mushrooms for thousands of years. Around a century ago, American seed catalogs offered mushroom spawn bricks for 30¢ each, right there between the melons and the mustard.

We're excited to collaborate with North Spore Mushrooms to offer the following selections for you to get started on your own fungus garden. These products are all Maine-grown without pesticides, on natural substrates. Available as plug spawn and sawdust spawn. All can be refrigerated until you are ready to start growing. We send detailed instructions with your order and you can find more info about each item on our website. We ship mushrooms and tools in April during our regular shipping season. If you're a beginner, consider starting out with a kit.

Mushrooms

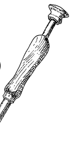
For each type, we offer one or more of the following options:

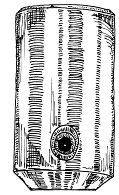


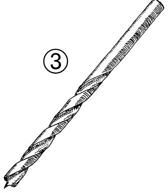
- **Plug Spawn** Small wooden dowels colonized by mushroom mycelium. 50 plugs will inoculate a single 4' long, 4" diameter log. Drill 5/16" holes (or 8.5mm with angle-grinder adapter) into your log, hammer in the plugs and seal the holes with wax. Plugs are an excellent choice for beginners. **Plugs come in bags of 100 or 500.**
- **Sawdust Spawn** Hardwood sawdust colonized by mushroom mycelium. **Each bag contains 5½ lbs of inoculated hardwood sawdust**, enough for about 25 logs. Drill 12mm holes in your logs, pack the sawdust using an inoculation tool and seal with wax. Good for commercial mushroom growers. Note: Only Wine Cap may be grown on hardwood sawdust in garden paths. Almond Agaricus can be mixed into compost for the garden. All other types are grown on logs.
- **Plug Kits** A kit contains 100 plugs, a small block of wax with dauber, 5/16" drill bit and instructions. Everything but the log, drill and hammer to get you started growing mushrooms. Available for all types except Almond Agaricus, Chicken of the Woods and Wine Cap.
- **Countertop Kits** Grow mushrooms in the kitchen on this inoculated sawdust loaf! Simply slice open the bag, and keep in a humid environment, like beside the sink. Mushrooms should start to produce "pins" within two weeks and will grow quickly. Each kit contains a 5-lb inoculated sawdust block that could produce up to 3 lbs of mushrooms over 2–4 months. Instructions included. Available for Grey Oyster, Golden Oyster, Lion's Mane and Shiitake. The easiest way to get into growing mushrooms. Makes a great gift.

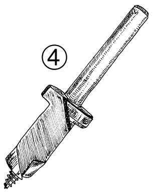
What You'll Need

These mushrooms will fruit best on hardwood logs or sawdust. Instructions will include recommended log species lists. Depending on the product you choose, you will need to provide your own hammer and drill. Here are a few tools to help you get a head start:

①


②


③


④


① **Inoculation Tool** A simple hand tool for rapid inoculation of hardwood logs with sawdust spawn. (Not needed for plug spawn.) Use with 12mm drill bit holes for best results.

L605A Inoculation Tool, $40.00

② **Angle Grinder Adapter** Used to attach a drill bit to an angle grinder to increase speed on large projects. Fits 5/8" spindle and takes both 12mm and 8.5mm drill bits.

L606A Angle Grinder Adapter, $50.00

③ **5/16" Drill Bit** Low-speed drill bit for small plug-spawn mushroom projects.

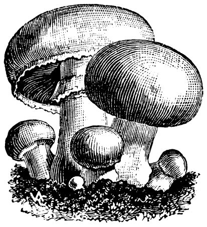
L607A 5/16" low-speed drill bit, $7.00

④ **High-Speed Drill Bits** Specifically made for log inoculation, designed to clear the hole of sawdust as it drills to a set depth that matches plug length or sawdust dosage. For large projects, we recommend an angle grinder adapter with an 8.5mm bit for plug spawn or a 12mm bit for sawdust.

L608A 8.5 mm high-speed drill bit with stop collar, $20.00
L609A 12 mm high-speed drill bit with stop collar, $20.00

Sealing Wax A clear food-grade cheese wax ideal for sealing holes in inoculated logs. One pound of wax is enough to seal about 10 logs. Sealing the holes is critical to success because it protects the spawn from drying out and from contamination. Wax is in granular form.

L610A Sealing Wax 1 lb, $6.00



***Agaricus subrufescens* Almond Agaricus** Related to the well-known portabella, crimini and button mushrooms but has its own unique aroma and flavor reminiscent of almonds. The species grows on composted material and thrives in warmer temperatures. A great addition for the home gardener, can be incorporated with compost into vegetable and perennial plantings and does well in season-extension structures. (Available as sawdust spawn only.)

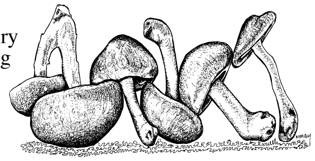
611C Almond Agaricus Sawdust Spawn, $20.00

***Hericium erinaceus* Lion's Mane** Pure white cluster of icicle-like teeth, often found on beech and birch in the wild. When cooked, they have a consistency similar to crab meat. Naturally fruits during cooler months. Due to a slower colonization rate, a higher inoculation rate should be used. Can be grown on many different hardwood species, large- or small-diameter logs.

L612A Lion's Mane Plug Spawn, bag of 100, $15.00
L612B Lion's Mane Plug Spawn, bag of 500, $32.00
612C Lion's Mane Sawdust Spawn, $20.00
L612D Lion's Mane Plug Kit, $25.00
612E Lion's Mane Countertop Kit, $25.00

***Laetiporus sulphureus* Chicken of the Woods** Large bright orange fruit bodies have a texture reminiscent of chicken. Great in soups and stir-fries. Fruits all season from late spring into late fall. Prefers large-diameter oak logs. (Not available in a kit.)

L613A Chicken of the Woods Plug Spawn, bag of 100, $15.00
L613B Chicken of the Woods Plug Spawn, bag of 500, $32.00
613C Chicken of the Woods Sawdust Spawn, $20.00



***Lentinula edodes* Shiitake** Brown umbrella-shaped spongy caps, very nutritious and medicinal. Good for drying and reconstituting in winter soups. Meaty texture when cooked. Grows best on oak and maple. Fruits throughout the growing season and responds well to commercial forced-fruiting production methods. This is the Wide Range Shiitake strain.

L614A Shiitake Plug Spawn, bag of 100, $15.00
L614B Shiitake Plug Spawn, bag of 500, $32.00
614C Shiitake Sawdust Spawn, $20.00
L614D Shiitake Plug Kit, $25.00
614E Shiitake Countertop Kit, $25.00

***Pleurotus citrinopileatus* Golden Oyster** Tropical oyster strain that thrives in warm weather. Produces beautiful clusters with yellow caps that are a favorite at farmers markets. Grows well on many different hardwood species including oak, maple and poplar.

L615A Golden Oyster Plug Spawn, bag of 100, $15.00
L615B Golden Oyster Plug Spawn, bag of 500, $32.00
615C Golden Oyster Sawdust Spawn, $20.00
L615D Golden Oyster Plug Kit, $25.00
615E Golden Oyster Countertop Kit, $25.00

***P. ostreatus* Grey Oyster** Very popular fleshy firm edible grey-white oyster-shaped caps often found growing on old dying maple trees. Our most productive oyster strain. Reliable and cold tolerant, fruits prolifically in early spring or late fall. Grows well on many different hardwood species including oak, maple and poplar.

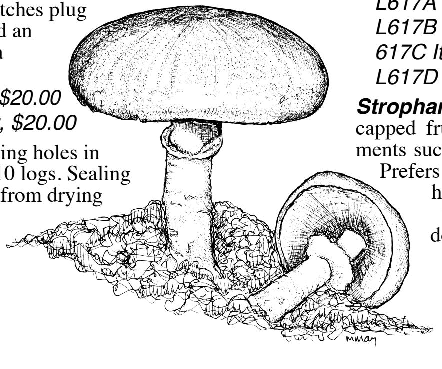
L616A Grey Oyster Plug Spawn, bag of 100, $15.00
L616B Grey Oyster Plug Spawn, bag of 500, $32.00
616C Grey Oyster Sawdust Spawn, $20.00
L616D Grey Oyster Plug Kit, $25.00
616E Grey Oyster Countertop Kit, $25.00

***P. pulmonarius* Italian Oyster** Clusters of tender brown caps with thick white stems. Considered to be one of the finest culinary oyster mushrooms. Also considered to be very medicinal with cardiovascular and cholesterol-controlling benefits. Grows well on many different hardwood species including oak, maple and poplar.

L617A Italian Oyster Plug Spawn, bag of 100, $15.00
L617B Italian Oyster Plug Spawn, bag of 500, $32.00
617C Italian Oyster Sawdust Spawn, $20.00
L617D Italian Oyster Plug Kit, $25.00

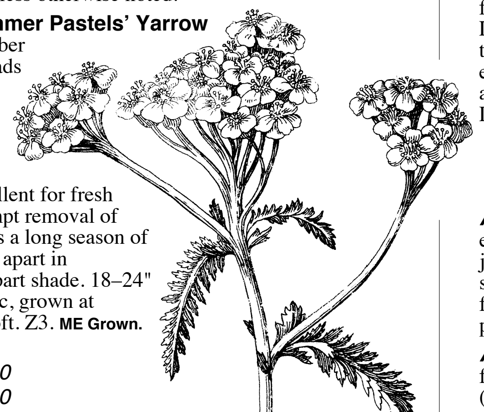
***Stropharia rugosoannulata* Wine Cap** Vigorous red-capped fruiting bodies for growing in non-sterile environments such as outdoor sawdust beds, wood chips and straw. Prefers hardwood chips but will grow on a mix of soft and hard. Once established, they will produce for several years and can be easily transplanted to fresh woody debris beds. (Available as sawdust spawn only.)

618C Wine Cap Sawdust Spawn, $20.00



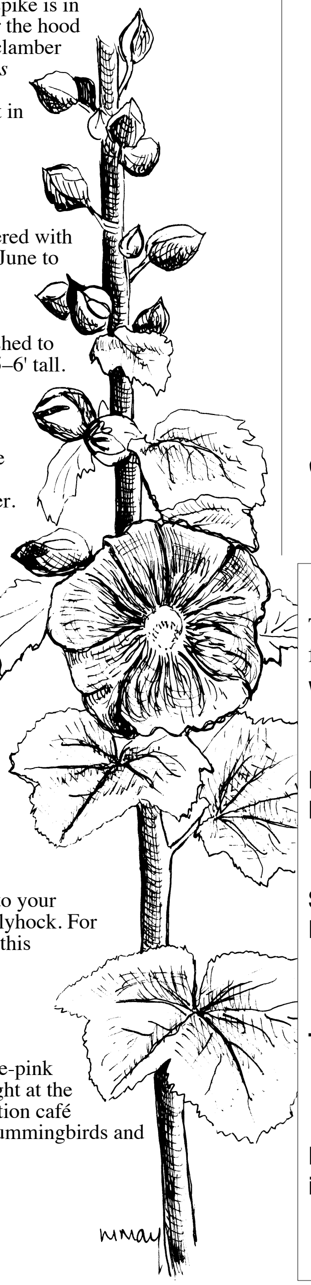
Herbaceous Perennial Plants

USDA hardiness zone (chart on page 71) follows each description. All our plants are nursery propagated. They are not dug from the wild! All plant stock is bare root unless otherwise noted.



***Achillea millefolium* 'Summer Pastels' Yarrow** Blooms June through September featuring 2–3" flat-topped heads of little pastel flowers in a range of colors including pink, red, white, yellow, salmon, orange and mauve. Green fern-like foliage is aromatic when crushed. Excellent for fresh and dried arrangements. Prompt removal of faded flower heads guarantees a long season of blooms. Plant crowns 12–24" apart in well-drained soil, full sun to part shade. 18–24" tall. MOFGA-certified organic, grown at Ripley Farm in Dover-Foxcroft. Z3. **ME Grown.**

***L675A**: 1 for $6.50*
***L675B**: 3 for $17.00*
***L675C**: 6 for $30.50*



***Aconitum napellus* English Monkshood** Also called **Friar's Cap**. Produces a mass of late summer blooms with dense showy spikes of dark violet-blue helmet-shaped flowers above elegant palmate foliage in late summer. Grand delphinium-style blooms rarely need staking. An excellent cutflower—cut when 1/3 to 1/2 the spike is in bloom. I love watching bumblebees climb under the hood and completely disappear into the flowers then clamber out again covered with pollen. *The entire plant is poisonous; wash your hands after handling or cutting*. Prefers partial shade. Plant 15–20" apart in moist soil. 36–40" tall. Z3.

***L676A**: 1 for $4.25*
***L676B**: 3 for $10.00*
***L676C**: 6 for $18.00*

***Alcea* Hollyhock** Classic towering spires covered with disc-shaped blossoms for extended bloom from June to October. This year we're offering all first-year–flowering cultivars which are truly perennial, not biennial like most Alceas on the market. Cut back to 12" after flowering has finished to encourage root growth. Plant 12" apart. Grows 5–6' tall. *Supplies may be limited. Order early!* Z3. (3 1/2" plug stock)

***A. ficifolia* 'Las Vegas' Singles Mix** Remarkable fig-leaved hollyhock displays single flowers in a foxy range of colors from chestnut-brown to red, pink to white, and yellow to copper.

***L677A**: 1 for $4.50*
***L677B**: 3 for $11.75*
***L677C**: 6 for $22.00*

***A. rosea* 'Black Knight'** A single dusky midnight-purple beauty with a watchful yellow eye. Night gathers, and now my watch begins. I shall live and thrive at my post. I am the shield that guards the garden gate. I shall not be eaten by Japanese beetles—for in my dreams, they only have eyes for the golden-petaled beauties. I pledge my life and honor to lead you safely up the garden path, for this night and all the nights to come.

***L678A**: 1 for $4.50*
***L678B**: 3 for $11.75*
***L678C**: 6 for $22.00*

***A. r.* 'Mars Magic'** Bring a vintage look back to your homestead with this classic single bright red hollyhock. For those who missed out last season, we are listing this popular cultivar again.

***L679A**: 1 for $4.50*
***L679B**: 3 for $11.75*
***L679C**: 6 for $22.00*

***A. r.* 'Radiant Rose'** Old-fashioned bright rose-pink single blossoms. I planted mine with Black Knight at the corner of my hyssop bed. It's a veritable pollination café when the flowers come out—a steady buzz of hummingbirds and mason bees abounds.

***L680A**: 1 for $4.50*
***L680B**: 3 for $11.75*
***L680C**: 6 for $22.00*

***Amsonia tabernaemontana* var. *salicifolia* Willow-leaf Bluestar** Clusters of deep blue pointed flower buds form and unfurl into powder-blue star-shaped florets held above deep green fine grassy willow-like foliage. Blooms in early June in northern Maine. Gorgeous foliage turns gold in the fall. Best planted en masse. Forms a handsome vase shape at maturity. Looks fabulous with catmint and irises. Native to Illinois and onwards south to Texas. Prefers moist woodland slopes. Adaptable to most garden environments but performs best in full sun to part shade in moist slightly acidic soil. 30" tall. MOFGA-certified organic, grown at Ripley Farm in Dover-Foxcroft. Z3. **ME Grown.**

***L681A**: 1 for $5.75*
***L681B**: 3 for $15.00*
***L681C**: 6 for $27.00*

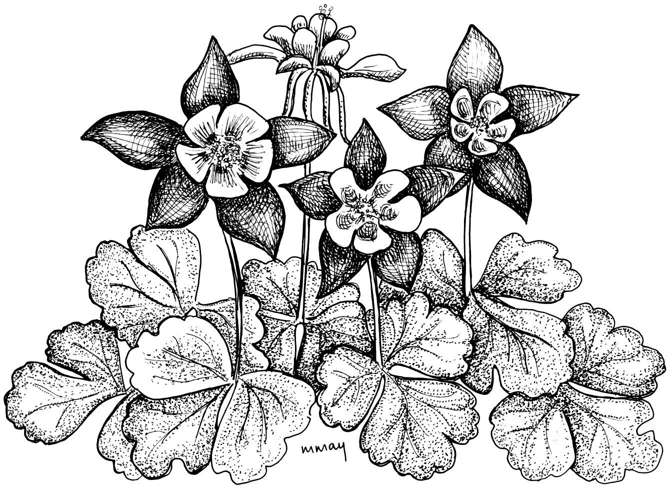
***Aquilegia* Columbine** Delightful little stacks of round-lobed leaves emerge in early spring when not much else is green. Soon after, magical jewel-like nodding blossoms dance above the foliage. The elegant slender spurs are filled with nectar irresistible to pollinating hummingbirds. Blooms from late May to early June. Prefers light moist well-drained soil. Nice planted in clusters, 12–18" apart. Dappled shade guarantees the best color. Z3.

***A. canadensis* Wild Columbine** This lovely northeast American native features delicate red-spurred sepals with yellow petaled skirts. 12–24" tall. (Nursery-propagated plug stock)

***L682A**: 3 for $9.50* ***L682B**: 6 for $16.50* ***L682C**: 12 for $29.00*

***A.* x *hybrida* 'McKana Giants'** An old British hybrid of uncertain parentage combines the delights of the wild columbine habit with longer bloom time and giant flowers sporting long spurs and a bright bold assortment of colors, including bicolors. Excellent for cutting. 24–30" tall.

***L683A**: 1 for $3.00* ***L683B**: 3 for $8.00* ***L683C**: 6 for $14.00*



Planting Guide for Bare-root Perennials

To receive our guarantee for items on pages 55-65, you must have followed these instructions:

When you receive your order:

- Open the bags and check the plant stock immediately
- Roots and crowns should be firm and pliable, not soft or brittle.

Do not plant directly outside!

Pot up the rootstock in well-drained potting mix.

- Most plants need a deep 6" pot or a 1-gallon container.
- Avoid coiling the roots in the bottom of undersized containers.

Set the pots out in shade for 2 weeks.

During the 2-week period protect your plants from:

- Freezing
- Drying out
- Long periods of cold & wet conditions

Transplant outside after frost danger.

- Dig a hole twice the size of the pot.
- Add a little compost to the hole.
- Plant crown-tops just below ground level.

If you cannot pot up your plants immediately upon receipt:

- Store bare-root plant stock in a cool, dark (35–40°) location for no more than one week.

Jack-in-the-pulpit: The Forest Floor's Hermaphrodite

by Leah Mital

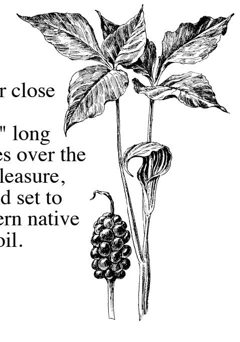
I don't want to make any controversial statements about whether it is easier to be male or female, but it is tempting in this case. When times are good on the forest floor, Jack turns into Jackie and when the going gets rough, Jackie turns back into Jack. We could say that Jackie likes to cruise during the good times, but her reproductive work requires a more nutrient-rich environment.

Jack-in-the-pulpit, *Arisaema triphyllum*, is hermaphroditic and begins adulthood as Jack, its male expression. After maturing past the seedling stage, the plant will produce male flowers on the spadix, the cylindrical reproductive structure commonly referred to as "Jack" and are buried deep inside the pulpit, covered by the hooded spathe. The musty-smelling spadix attracts gnats that enter through an opening in the base of the spathe and move up and down the spadix gathering pollen from the male flowers.

If conditions were ideal the previous year, elsewhere in the forest, another jack-in-the-pulpit stored enough energy to emerge this year as a female, producing female flowers. This growth takes a significant amount of energy and requires optimal conditions of light, nutrient availability and moisture. Thus, Jack will only emerge the next year as Jackie if the conditions are favorable. Jackie comes endowed with two sets of leaves in order to capture more sunlight and produce the energy she needs for reproduction. Male plants in a stressed environment will remain in the male form into the next year. Females under stress will revert to male and conserve energy.

Jack-in-the-pulpit is conspicuous in the early fall. The brilliant red fruits draw the eye from the changing canopy foliage in late September to the floor of eastern mixed hardwood forests. The bright red show on an autumn day denotes its success after many potential cycles between its male and female expressions to result in the production of fruits.

Perhaps the Jacks boast that they can tough out a nutrient poor environment and wait out the bad times. Jackie then reminds us how much more energy is needed for her role in reproduction; males have the easy job of producing pollen-bearing flowers. In the end, the strategy of sequential hermaphrodism ensures more successful reproduction. In a stressed environment, the jack-in-the-pulpits in the area simply do not produce seeds. They conserve their resources and produce fewer seeds of a higher quality and viability for germination. When we see the brilliant red among the browning leaves of the fall, the story ends in success of gender synchronicity. The male plants have browned and wilted along with the other plants of the forest floor while Jackie boasts hermaphroditic success in a show of red to beckon the birds to disperse her seeds. Jackie does steal the show in the end.



***Arisaema triphyllum* Jack-in-the-Pulpit** In midspring, one or two compound leaves appear close to the ground, each with three leaflets framing an upright stem topped by a striped tannish-purple 3" long cuplike spathe (the pulpit) that contains and arches over the erect greenish-yellow spadix (Jack). It's a great pleasure, one I still remember, for the two- or three-year-old set to lift the flap and see Jack. This magical Northeastern native prefers dappled shade and moist rich woodland soil. Nursery propagated. Z3.

***L684A**: 1 for $4.25*

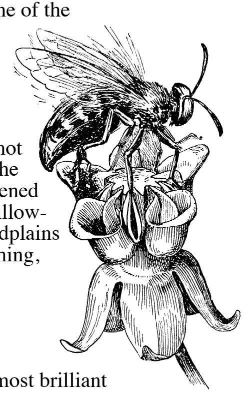
***L684B**: 3 for $10.00*

***L684C**: 6 for $18.00*

***Armeria maritima* 'Splendens' Sea Thrift** Also known as **Thrift** or **False Sea Pink**. Bright carmine-rose ball-shaped flowers bloom all spring atop long lanky leafless stalks held above tight mounds of silvery evergreen grassy foliage. Makes a tidy clump in the rock garden or container, but also great planted en masse as a groundcover. Tolerates hot dry rocky soils and grows beautifully along the coastline or highway where few other garden plants can tolerate the high salt concentrations. Shear off faded flowerheads for attractive little clumps of foliage throughout the season. Resents being moved—choose a spot near the front of border or rock garden and leave it there. Light loose winter mulch recommended. Prefers full sun and requires well-drained soil. 8-10" tall. Z3. (3" plug stock)

***L685A**: 2 for $7.25* ***L685B**: 4 for $13.50* ***L685C**: 6 for $19.25*

Asclepias Named for Asklepios, the Greek god of healing. Commonly known as **Pleurisy Root**, dried roots from the genus were traditionally used in small doses as an expectorant, anti-inflammatory and general tonic. Attracts all manner of bee and butterfly. Watch one of the miracles of summer unfold before your eyes as monarchs lay their eggs on the leaves—a nutritious food source for the resulting caterpillars. Both MOFGA-certified organic, grown at Ripley Farm in Dover-Foxcroft. Z3. **ME Grown.**



***A. incarnata* Swamp Red Milkweed** This is not the common milkweed so familiar to all of us in the Northeast. *Asclepias incarnata* forms unique flattened clusters of upturned red-rose–colored flowers. Willow-like leaves are 4–5" long. Grows naturally in floodplains and wet meadows. Prefers moist soil. Clump-forming, great for naturalizing. 5' tall.

***L686A**: 1 for $6.50*

***L686B**: 2 for $11.25*

***L686C**: 3 for $15.25*

***A. tuberosa* Butterfly Weed** Undeniably the most brilliant summer wildflower in North America, featuring vivid tangerine-orange clusters of flowers atop slender fuzzy stems, covered with green lance-shaped leaves. Spent flowerheads transform into prominent spindle-shaped seed pods that make a unique addition to mixed bouquets. The fleshy taproot will not tolerate clay or low ground. Plant in full sun, 18–24" apart in well-drained fertile soil. 24" tall.

***L687A**: 1 for $6.75* ***L687B**: 3 for $17.75* ***L687C**: 6 for $31.50*

***Astilbe* Feather Flower** Also called **False Spirea**. Long-lasting plumes of flamboyant feathery flowers light up the shadier parts of the perennial border. Excellent as a dried flower. Elegant fern-like foliage forms an attractive clump that looks good all season. Prefers cool shady areas but is surprisingly tolerant of direct sun when planted in consistently moist well-drained soil. Plant 18–24" apart and mulch it! Divide clumps every few years. Z4. This year's **Awesome Astilbe Mixes** each include our choice of 3 amazing astilbe varieties to glitter up your shade gardens! Each plant will be individually bagged and labeled with its name and cultural information. Height range for both mixes is between 18–40".

Red & Purple Rain Mix Color range includes lavender-purple, raspberry-pink, raspberry-purple and red shades.

***L688A**: 3 for $14.25*

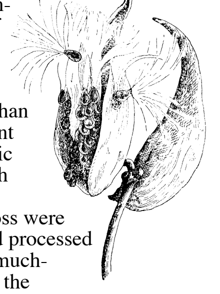
Light & Lovely Mix Color range includes light pink, peach, and milk-and-honey white shades.

***L689A**: 3 for $14.25*

Silky Seeds: Sailors, Drifters, Floaters & Tramps

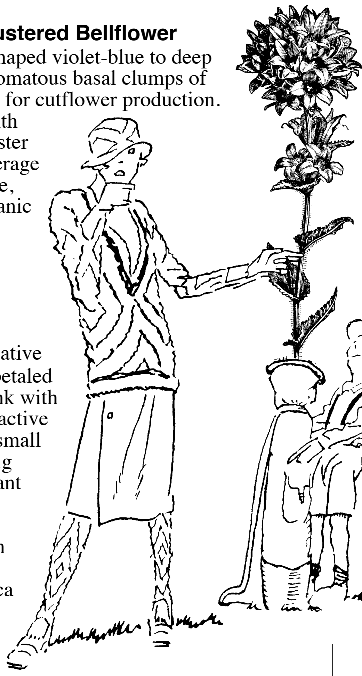
Each pod of common milkweed, *Asclepias syriaca,* contains around 170 seeds and there are roughly 400 silky fibers attached to each one. These delicate, durable travelers can float for miles through the air before the seed becomes earthbound. The flossy fibers became a major crop during WWII when the U.S. launched a nationwide program for the collection and cultivation of milkweed for the purpose of using the floss for insulation in flight jackets and in flotation devices and for the military. A little over 1 lb of milkweed floss can keep a 150-pound person afloat for more than 40 hours in the water. For this reason the government changed the status of the "weed" to that of a strategic wartime material. Roughly 10,000 pods hold enough floss to fill 750 life preservers.

It is estimated that 11 million lbs of milkweed floss were gathered by average citizens and schoolchildren and processed into lifesaving devices during the war, providing a much-needed source of income for those most affected by the economic woes of the time.



***Baptisia australis* Blue False Indigo** An early summer stand-out with vibrant blue lupine-like flowers. Seed pods turn black in fall, adding interest to the autumn landscape and providing a unique element to dried floral arrangements. Has a bushy habit and shrub-like structure once mature. Will develop an extensive root system, good for holding slopes to prevent erosion. Baptisia is a member of the pea family, and you'll notice a resemblance in its foliage and flowers, as well as its fondness for cooler weather. Plant 3' apart in full sun and well-drained acid soil. Grows 3–4' tall and just as wide. Z3.

__L690A__: 1 for $6.50
__L690B__: 3 for $16.75
__L690C__: 6 for $30.00

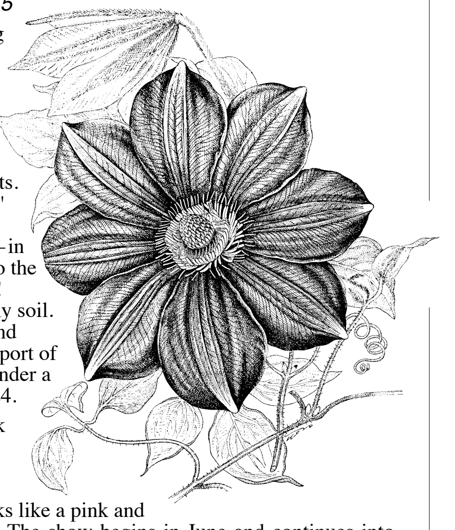


***Campanula glomerata* 'Superba' Clustered Bellflower**
Spherical clusters of upward-facing bell-shaped violet-blue to deep royal-purple flowers form atop dense rhizomatous basal clumps of green fuzzy foliage. Highly recommended for cutflower production. Absolutely stunning in mixed bouquets with Butterfly Weed (**687**) and Rattlesnake Master (**704**). Plant in full sun to part shade in average well-drained soil. The farther north you are, the more sun it requires. Our certified-organic stock is grown at Ripley Farm in Dover-Foxcroft. 28" tall. Z3. **ME Grown.**

__L691A__: 1 for $6.50
__L691B__: 2 for $11.25
__L691C__: 3 for $15.25

***Claytonia virginica* Spring Beauty** Native spring **ephemeral**. Magical clusters of 5-petaled star-shaped blossoms are white to light pink with darker pink veining and pink anthers. Attractive deep green grass-like foliage. Spreads by small edible underground corms. Hosts the spring beauty mining bee, *Andrena erigeniae*. Plant 6–10" apart in dappled sun or shade under established trees and shrubberies in moist well-drained woodland soil. Grows wild in moist rich woods, thickets, clearings and wetlands throughout eastern North America and parts of the UK. 3–6" tall. Z6.

__L692A__: 3 for $7.50
__L692B__: 6 for $12.25
__L692C__: 12 for $20.75



Clematis Gorgeous ascending perennial vine with classic star-shaped flowers. Clematis is never found alone in the wild and prefers to climb or crawl onto arbors, balconies, fences, small buildings, stone walls and especially other plants. I planted mine underneath a 12' tall highbush cranberry along with delphiniums and trollius—in a few years it will reach up into the entire shrub and look fabulous! Plant in rich well-drained loamy soil. Mulch to keep the roots cool and evenly moist. Provide firm support of solid wood or metal, or plant under a shrubbery for it to grab onto. Z4.

***C.* 'Earthquake'** Vibrant pink star-shaped flowers with whitish-pink central bars. Pink filaments with stunning claret anthers. From a distance it looks like a pink and white galaxy. Long blooming. The show begins in June and continues into September! 6–9' tall.

__L693A__: 1 for $14.00 *__L693B__: 2 for $24.25* *__L693C__: 3 for $33.00*

***C.* 'Fireworks'** Velvety purple star-shaped flowers with a wide magenta central bar that runs all the way to the petal tips. White filaments with purple anthers. One of the best choices for covering large trellises and inducing envy among your nosiest plant-loving neighbors. First flush of blooms appear in May-June. The second flush appears in August and runs into September. Color may vary depending on soil type but stunning in every way! 8–10' tall.

__L694A__: 1 for $14.00 *__L694B__: 2 for $24.25* *__L694C__: 3 for $33.00*

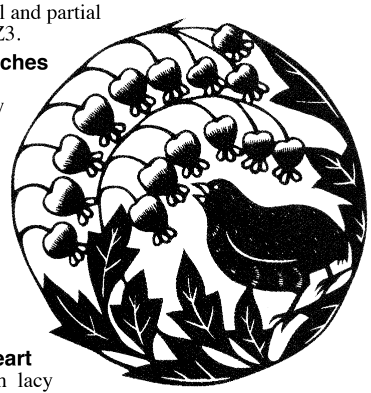
***C.* 'Niobe'** Smoldering dark ruby-red blossoms with cream-colored stamens. Outperformed the other clematis in my gardens last year, looking gorgeous from start to finish and climbing with great enthusiasm. Holds its color beautifully through sun and rain. Long bloom time from May-Sept. 6–8' tall.

__L695A__: 1 for $14.00 *__L695B__: 2 for $24.25* *__L695C__: 3 for $33.00*

***Delphinium* New Millennium Stars Mix** This hybrid series mix of first-year–flowering delphiniums features some of the most glorious cultivars I've seen—Black Eyed Angels, Blue Lace, Cobalt Dreams, Lilac Ladies, Moonlight Blues, Pagan Purples and Pink Punch, to name a few. Elegant cylindrical terminal flower spikes rise 3–6' above waist-high clumps of palmate glossy green foliage. The New Millenniums develop thicker sturdier flower stalks than the more widely known Pacific Giants. Considered more tolerant to heat and humidity than many standard cultivars, yet the New Millenniums also thrive in super-chilly corners of the world with reports of successful perennial plantings in frosty parts of Canada and even Alaska! Avoid overhead watering to prevent disease. Mulch recommended to keep the roots cool and moist. Delphiniums are hungry hippos—sidedress regularly with compost for best bloom. Plant 32" apart in highly fertile non-acid loam. Light shade is best but full sun is fine. 60" tall. Z3. (3½" plug stock)

__L696A__: 2 for $11.75
__L696B__: 4 for $20.25
__L696C__: 6 for $27.00

Dicentra Graceful racemes arch over clumps of attractive cut foliage. Distinctively shaped flowers dangle in a row on each raceme like charms on a bracelet. Thrives in rich moist soil and partial shade. Plant 2–4" deep, 24" apart. Z3.

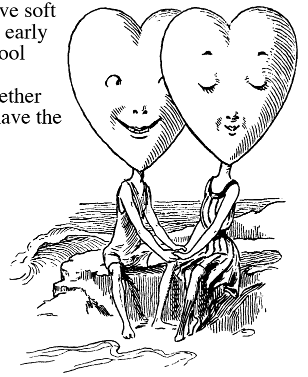


***D. cucularia* Dutchman's Breeches**
Native spring **ephemeral**. White yellow-tipped flowers look like tiny pantaloons suspended above intricately cut grey-green foliage. Blooms in April-May with the daffodils. Native eastern wildflower thrives in any moist but not soggy woodland soils. 8–12" tall. Nursery propagated.

__L697A__: 3 for $6.50
__L697B__: 6 for $11.25
__L697C__: 12 for $20.25

***D. eximia* Fringed Bleeding Heart**
North American native plant with lacy blue-green foliage and unique dangling heart-shaped blossoms that characteristically wear pink, but on occasion, are in the mood for white. Starts blooming in early summer and with regular deadheading can be cajoled into flowering all summer long. Given cool woodland conditions, the foliage of this Dicentra stays awake and looking good all season. Native to the Northeast and the Appalachian Mountains. Plant in full to dappled shade in moist well-drained fertile soil. Will not tolerate wet winter soils. Freely self sows and will form a lovely colony if you let it. 18" tall.

__L698A__: 1 for $6.50 *__L698B__: 3 for $16.75* *__L698C__: 6 for $30.25*



***D.* x 'Sulphur Hearts' Yellow Bleeding Heart**
Lovely sulphur-yellow hearts dangle above soft blue-grey lacy foliage from late spring to early fall. Flower color can be described as a cool matte pastel lemon-yellow with a subtle lavender-purple tip. Mass this beauty together with some blue-green hostas and you'll have the perfect stop-and-stare garden along your woodland path. 12" tall.

__L699A__: 1 for $11.50
__L699B__: 2 for $20.00
__L699C__: 3 for $27.00

Native Spring Ephemeral Plants and their Relatives

Before the trees leaf out in spring, the sun begins to melt the snow and warm the forest floor, and ephemeral perennials take the stage with uniquely breathtaking early flowers. By summer these fleeting beauties tire of the limelight and retreat back to the earth to build their strength for the next big show. Planting spring ephemerals provides a much-needed early food source for pollinators and makes walking through the woods in early spring even more interesting than usual!

This year we're thrilled to offer four rare high-quality nursery-propagated native spring ephemerals:

- ***Claytonia virginica* Spring Beauty**
- ***Dicentra cucularia* Dutchman's Breeches**
- ***Erythronium americanum* Yellow Trout Lily**
- ***Sanguinaria canadensis* Bloodroot**

Please note that the stock will be smaller than our other bare-root perennials, but they'll size up quickly if given the optimal growing conditions recommended in our planting guide on page 55.

***Dictamnus albus* 'Albiflorus' Gas Plant** Terminal spikes of pure white 5-petaled flowers with long protruding stamens. Flowers and star-shaped seed pods contain flammable oils that flare in a quick vapor burn when touched by a flame. This is harmless to the plant and a sight to behold! Look it up on YouTube or, better yet, get yourself a fire permit and see for yourself on a windless night! Forms bushy clumps of leathery glossy green pinnate leaves. Aromatic foliage can cause allergic skin reactions in some people, so wear gloves when handling. Plant 18–20" apart in full sun in infertile humusy well-drained soil. 30" tall. Z3.

__L700A__: 1 for $7.75
__L700B__: 2 for $13.25
__L700C__: 3 for $18.00

***Digitalis* Foxglove** Delightful tubular bell-shaped flowers with veined and spotted throats form along stately spires above basal rosettes of deep green velvet foliage. Flowers June through August. Good for cutting or the naturalized border. A must-have in every cottage garden. Considered perennial but is best treated as biennial. Spread out the seedlings as they appear and a glorious patch will result in a few years. Plant 12–24" apart in moist slightly acid soil in full sun to part shade. *Caution: all parts of the plant are poisonous if ingested; wash hands after handling.*

***D. mertonensis* Strawberry Foxglove** Copper-tinged strawberry-rose 2½" pendulous bell-shaped flowers adorned with pink and white spotted throats form along stately spires above basal rosettes of deep green velvet foliage. 2–4' tall. Z3. (3½" plug stock)

__L701A__: 1 for $4.50
__L701B__: 3 for $11.75
__L701C__: 6 for $22.00

***D. purpurea* 'Excelsior' Mix Foxglove** Colors range from pink, rose, purple, cream, primrose and white. Blossoms completely surround sturdy upright stems. MOFGA-certified organic, grown at Ripley Farm in Dover-Foxcroft. 36" tall and then some. Z4. **ME Grown.**

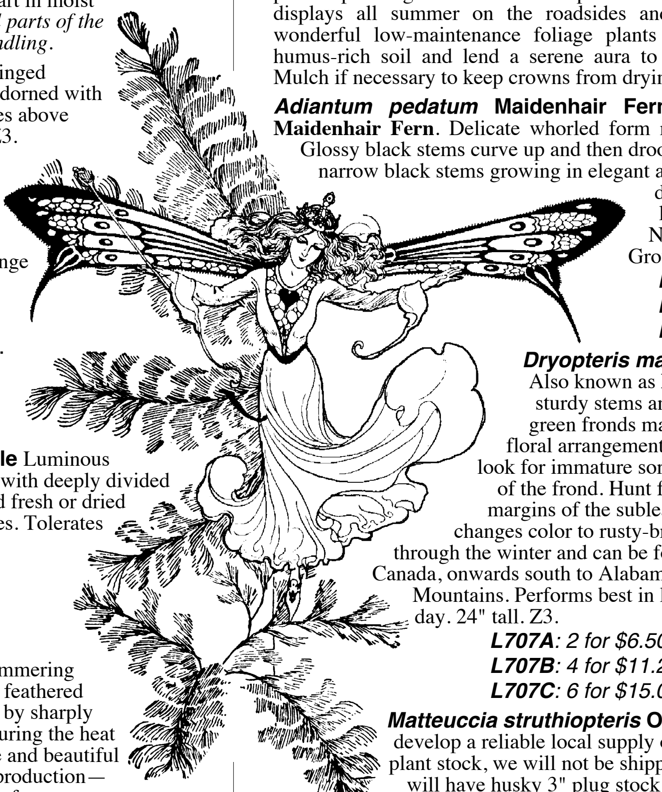
__L702A__: 1 for $6.50
__L702B__: 2 for $11.25
__L702C__: 3 for $15.25

***Echinops bannaticus* 'Blue Glow' Globe Thistle** Luminous 1½" steel-blue spiky spheres balance atop stiff stems with deeply divided silvery green leaves. Excellent addition to wreaths and fresh or dried arrangements. Blooms July to August. Beloved by bees. Tolerates shallow rocky ground. Plant 1–2' apart in full sun and well-drained soil. 3–4' tall. Z3.

__L703A__: 1 for $5.75
__L703B__: 3 for $14.75
__L703C__: 6 for $26.25

***Eryngium yuccifolium* Rattlesnake Master** Shimmering globe-thistle–like 1" greenish-white flowerheads with feathered silvery-green bracts on smooth stiff stems surrounded by sharply cut leathery foliage. Emits a subtle honey-like scent during the heat of the day. This North American native exhibits a rare and beautiful silhouette wherever it grows. Fabulous for cutflower production—an excellent bouquet-builder, providing good structure for arrangements. Attracts numerous types of long- and short-tongued bees, wasps, flies, butterflies, moths and beetles. Prefers full sun and well-drained sandy soils. Self-seeds freely over time. Plants tend to open up and sprawl if grown in rich soils or in anything less than full sun. Forms a taproot and is best left undisturbed once established. MOFGA-certified organic. Grown at Ripley Farm. 3–6' tall. Z3. **ME Grown.**

__L704A__: 1 for $7.25
__L704B__: 2 for $12.50
__L704C__: 3 for $16.50



***Erythronium americanum* Yellow Trout Lily** Native spring **ephemeral** also called **Dogtooth Violet**. Bright yellow nodding blossoms appear singly in March and last into April above trout-shaped olive-green basal leaves with beautiful reddish-brown mottling. Underground corms with fibrous roots and up to 3 stolons spread below the leaf litter, developing direct offshoots from the mother plant. Forms a dense ephemeral groundcover over time. It could be up to 5 years before you see a flower. Young flowerless plants are single leaved, and mature plants are 2-leaved and produce single flowers. This beautiful North American native hosts the trout lily mining bee, *Andrena erythronii*. Grows wild in rich damp open woodlands. Plant in dappled shade under established trees and shrubberies in moist well-drained slightly acidic woodland soil. 6" tall. Nursery propagated. Z3.

__L705A__: 2 for $13.50
__L705B__: 4 for $23.25
__L705C__: 6 for $31.50

Ferns These flowerless spore-producing perennials are represented by more than 10,000 species worldwide, ranging from 70' tropical tree ferns to teensy plants sprouting from cracks in alpine rock. In Maine we enjoy lush fern displays all summer on the roadsides and in the woods. Ferns make wonderful low-maintenance foliage plants that thrive in moist woodsy humus-rich soil and lend a serene aura to a shady garden or landscape. Mulch if necessary to keep crowns from drying out.

***Adiantum pedatum* Maidenhair Fern** Also known as **Eastern Maidenhair Fern**. Delicate whorled form makes it one of my favorites. Glossy black stems curve up and then droop toward the ground with more narrow black stems growing in elegant arches from the main stem. Tiny distinct ginkgo-like green leaves line every stem. Plant 12" apart. Native to eastern North America. Grows 10–12" tall. Z2.

__L706A__: 2 for $6.50
__L706B__: 4 for $11.25
__L706C__: 6 for $15.00

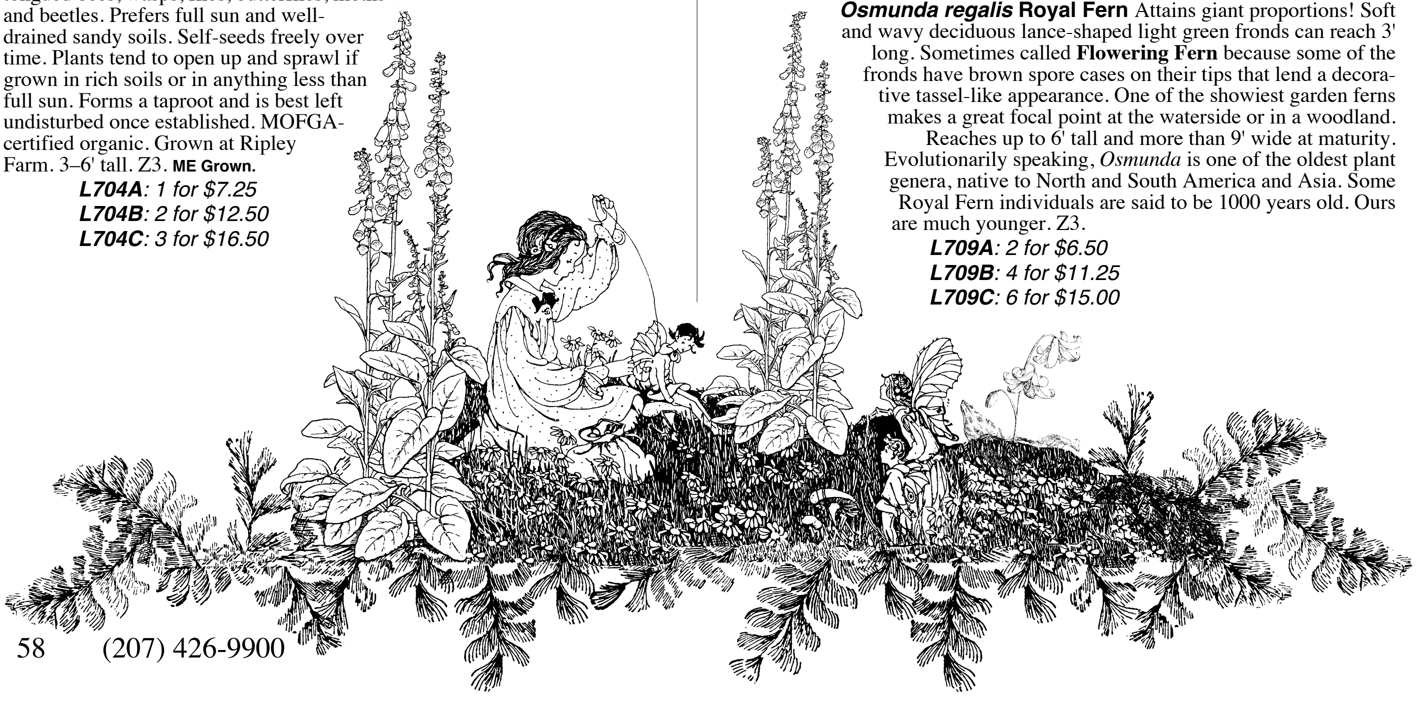
***Dryopteris marginalis* Leatherwood Fern** Also known as **Evergreen Wood Fern**. Strong sturdy stems and slightly glossy leathery grey-green fronds make this one of the best ferns for floral arrangements. In late spring it's great fun to look for immature sori (spore cases) on the underside of the frond. Hunt for small green bumps along the margins of the subleaflets. Later in the year, the sori changes color to rusty-brown. Evergreen leaves flourish through the winter and can be found in rocky wooded slopes in Canada, onwards south to Alabama and farther west to the Rocky Mountains. Performs best in less than 3 hours of sunlight per day. 24" tall. Z3.

__L707A__: 2 for $6.50
__L707B__: 4 for $11.25
__L707C__: 6 for $15.00

***Matteuccia struthiopteris* Ostrich Fern** While we work to develop a reliable local supply of nursery-propagated bare-root plant stock, we will not be shipping Ostrich Ferns this year. We will have husky 3" plug stock with good top growth available for purchase at the **Tree Sale only.** No preorders. First come, first served!

***Osmunda regalis* Royal Fern** Attains giant proportions! Soft and wavy deciduous lance-shaped light green fronds can reach 3' long. Sometimes called **Flowering Fern** because some of the fronds have brown spore cases on their tips that lend a decorative tassel-like appearance. One of the showiest garden ferns makes a great focal point at the waterside or in a woodland. Reaches up to 6' tall and more than 9' wide at maturity. Evolutionarily speaking, *Osmunda* is one of the oldest plant genera, native to North and South America and Asia. Some Royal Fern individuals are said to be 1000 years old. Ours are much younger. Z3.

__L709A__: 2 for $6.50
__L709B__: 4 for $11.25
__L709C__: 6 for $15.00



Geranium maculatum **Spotted Cranesbill** Clusters of single 1¼" wide pinkish-lilac saucer-shaped flowers. The deeply cut leaves turn vivid shades of reddish-orange in autumn and distinctive long narrow "cranesbill" seedpods flutter jauntily above the spreading foliage. Vigor, longevity, hardiness, lo-o-ong flowering period and lush attractive foliage make this North American native useful for borders, edging, rock gardens or as an orchard companion. Also known as **Wild Geranium**, this is the true geranium. Name confusion may be a big reason why this attractive easy-to-grow genus is not more popular: the tender bedding and indoor plant with big red flowers often called geranium is actually *Pelargonium*. For best results plant in the lightly shaded areas of wild open woodland gardens or in the orchard underneath your ancient apple trees. Plant 12–18" apart in average garden soil. 24" tall. Z4.

L710A*: 3 for $7.50* ***L710B****: 6 for $12.25* ***L710C****: 12 for $20.75*

Helenium autumnale **Red & Gold Sneezeweed Mix** Supposedly used for snuff in earlier times, hence the common name. A rich and blazing scheme of bronze, brown, crimson and yellow for a vibrant end-of-summer display. Single flowers resemble Coreopsis in shape but have a large center "button" much like a coneflower. Combine with asters and phlox for great late-season color. Not fussy, easy to grow, excellent cutflower. At its prime when most perennials are done blooming. Grows 4–5' tall. Z3. **ME Grown.**

L711A*: 1 for $5.75* ***L711B****: 3 for $15.00* ***L711C****: 6 for $27.00*

Hemerocallis **Daylily** Champion low-maintenance perennial produces a bush of narrow arched leaves topped with lily-shaped flowers from July to September. *Hemerocallis* means 'beautiful day,' referring to the fact that each flower lasts only a day, but since each scape (or stem) is covered with buds, bloom periods can be extensive and the long stems work well in bouquets. Trouble-free, chokes out weeds. Flourishes under a wide range of conditions, from full sun to shade, wet to dry. Plant 12–18" apart in average soil; benefits from an annual shovel or two of compost. This year's stock is one-year-old field-grown rootstock with two fans. Z2.

H. **'Always Afternoon'** Large 5½" rosy-purple blossoms with dark plum eye-rings, apple-green throats and subtly crimped dusky pink edges. We offered this eye-catching variety in 2015—since then several eager customers have asked us to bring it back! Early season rebloomer. 22" tall.

L712A*: 1 for $5.25*
L712B*: 3 for $13.75*
L712C*: 6 for $24.50*

H. **'Big Time Happy'** Sweetly scented 4" luminous canary-yellow flowers with slightly ruffled edges. Extended blooms and extra-early bloom time! 16" tall.

L713A*: 1 for $5.25*
L713B*: 3 for $13.75*
L713C*: 6 for $24.50*

H. **'Carrick Wildon'** Ginormous 8" flowers on this triple-tone flame-throwing daylily. Stunning spider-type with slightly twisty recurved petals displays giant red edges that softly shift to bright orange with a huge standout yellow throat and orange-painted anthers. A real cracker! Mid-late season extended blooms. Towering scapes are 36" tall.

L714A*: 1 for $8.00*
L714B*: 2 for $14.00*
L714C*: 3 for $19.00*

H. **'Moroccan Sunrise'** Luscious 6" lavender-rose blossoms with a with a thin golden edge and creamy white and yellow-green throats. Exquisite early season blooms! 20" tall.

L715A*: 1 for $8.00*
L715B*: 2 for $14.00*
L715C*: 3 for $19.00*

H. **'Passionate Returns'** Fragrant 4" bright clear super-rosy-red blossoms with golden-yellow throats with a touch of apple-green at the deepest point. Near-perfect form. One of the best daylilies ever introduced by hybridizer Darrel Apps who ambitiously plants out 2,500 seedlings every year then watches and waits for those worthy of introduction to appear. Long season blooms span a 3-month run from early summer through fall! 17" tall.

L716A*: 1 for $8.00*
L716B*: 2 for $14.00*
L716C*: 3 for $19.00*

Hibiscus moscheutos
Hardy Hibiscus Our grower cannot get these plants out of the ground early enough for our shipping season. As a result we will offer three varieties that are hardy to Zone 4 available for purchase at the **Tree Sale only**. No preorders. First come, first served!

Hosta Bold foliage forms orderly mounds with dependable sprays of fragrant bell-shaped flowers on tall stalks. Valuable and cherished low-maintenance border plant provides shade-loving groundcover from spring to frost. With their varying colors, textures and clump sizes, hostas alone under trees can make a woodland garden. Hostas tolerate a wide range of soil conditions but need moisture. Those with blue and variegated leaves develop their best color in shade. Deep shade gives fewer flowers but better leaf colors. Plant 2–4' apart in rich soil with adequate humus. Divide every 4–5 years, or disturb clumps as little as possible; they will improve with age as they spread and establish. Z3.

H. **'Guardian Angel'** A hosta like no other! I planted one of these angels along our woodland path in 2014 and have fallen in love with the mystical color-changing display. In early spring, large thick heart-shaped blue-green leaves emerge and gradually shade-shift to display creamy-white centers. By late spring, a distinctive green misting appears over the white. By mid-to-late summer, the center of the leaf changes color again to a cool misty blue. Color variations improve with maturity. Lavender flowers. A fabulous sport of Blue Angel. 24" tall and 56" wide.

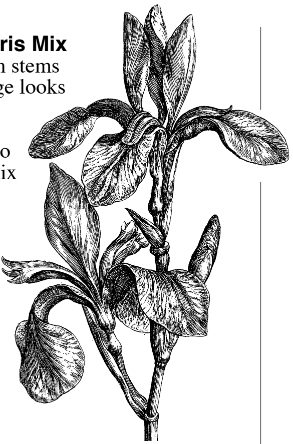
L717A*: 1 for $5.50*
L717B*: 3 for $13.00*
L717C*: 6 for $23.00*

H. **'Olive Bailey Langdon'** Giant rounded corrugated leaves with deep powder-blue centers and wide irregular golden margins. White flowers. An improved version of the popular 'Frances Williams' has better color and is less prone to burning. One of the best-looking hostas we've found in years—back by popular demand! 20" tall and 60" wide.

L718A*: 1 for $5.50*
L718B*: 3 for $13.00*
L718C*: 6 for $23.00*

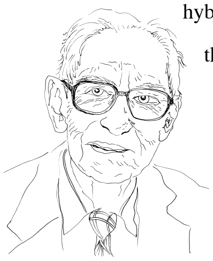
Humongous Hostas Mix Fulfill your shadiest garden fantasies! We will choose six of the biggest hosta varieties we can get our hands on, all listed as "Giants," in a variety of solid blues, solid greens, dark margins with light centers, and light margins with dark centers. Size matters: will be no shorter than 30" tall and up to 80" wide at maturity. Each plant will be individually bagged and labeled by name.

L719A*: 6 for $31.50*



***Iris sibirica* McEwen Skyline Trio Siberian Iris Mix** In late June, delicate flowers dance atop strong thin stems excellent for cutting. Tall slender slate-green foliage looks good all summer. Tolerates most conditions, but performs best in rich moist acid soil. Plant 12–15" apart in full sun or partial shade. Give them room to spread, and divide clumps every few years. This mix contains three varieties developed by Currier McEwen. **'Butter and Sugar'**—creamy white standards and buttery yellow falls. **'Harpswell Happiness'**—cool white standards and falls with light greenish-yellow veining and yellow hafts. **'Silver Edge'**—crisp icy blue falls outlined by a silver edge with a stunning lemon-yellow blaze; standards cornflower blue with a periwinkle line centered on each petal. Height range within this mix: 26-32" tall. Each variety will be individually bagged and labeled by name. Z3. **ME Grown.**

***L720A**: 3 for $15.75*

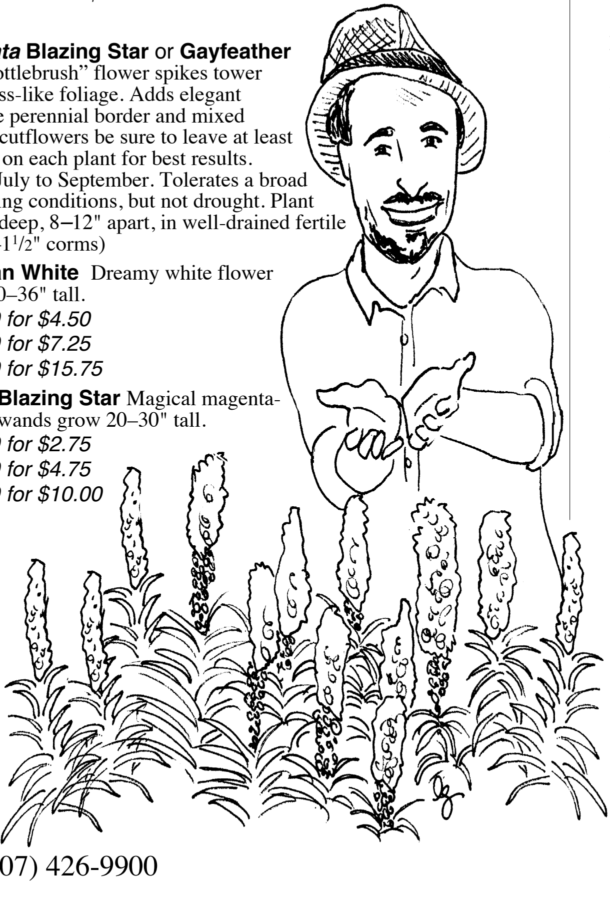


Currier McEwen Around 1968 at Seaways Gardens, overlooking the sound in South Harpswell, ME, Dr. McEwen crossed two blue Siberian irises and got some yellow offspring. He selected 'Butter and Sugar', the first yellow Siberian ever registered with the American Iris Society. From then on McEwen dedicated decades of his life to serious hybridization making thousands of crosses every year.

Born in 1902, he became a physician, developed the specialty of rheumatology, and was the youngest person ever to be a dean of the NYU School of Medicine. In 1939 he met with Albert Einstein arranging to help several Jewish doctors leave Germany. After his "retirement" to Maine, he maintained a medical practice in Brunswick. He died at 101 and was said to be an old man for only three weeks of his life. Those who knew him praise the way he found time to share his bright, optimistic, welcoming, indomitable spirit with everyone he met.

***I. versicolor* Northern Blue Flag** Northeastern native species carries gorgeous blue-violet flowers with bold purple veining and a white and lemon-yellow blaze. Tall slender blue-green arching lance-shaped leaves offer a strong vertical feature to the landscape. Requires consistently moist soil and prefers 2–4" of shallow standing water. Plant in full sun to part shade. Early. 36" tall. Z2.

***L721A**: 3 for $10.25*
***L721B**: 6 for $17.50*
***L721C**: 12 for $30.00*



***Liatris spicata* Blazing Star or Gayfeather** Stiff dense "bottlebrush" flower spikes tower above fine grass-like foliage. Adds elegant structure to the perennial border and mixed bouquets. For cutflowers be sure to leave at least $\frac{1}{3}$ of the stem on each plant for best results. Blooms from July to September. Tolerates a broad range of growing conditions, but not drought. Plant in full sun, 3" deep, 8–12" apart, in well-drained fertile soil. Z3. ($1\frac{1}{4}$–$1\frac{1}{2}$" corms)

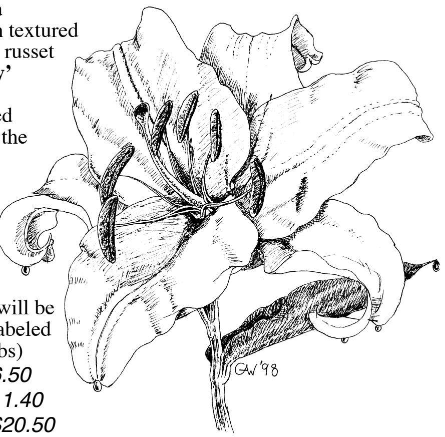
***L. s.* Floristan White** Dreamy white flower wands grow 30–36" tall.

***L722A**: 10 for $4.50*
***L722B**: 20 for $7.25*
***L722C**: 50 for $15.75*

***L. s.* Purple Blazing Star** Magical magenta-purple flower wands grow 20–30" tall.

***L723A**: 10 for $2.75*
***L723B**: 20 for $4.75*
***L723C**: 50 for $10.00*

***Lilium* Lily** Queen of the perennial border, fabulously showy and surprisingly easy to grow. Excellent as bedding plants or cutflowers, good as specimens or in solid masses. Light shade prolongs summer blooms and keeps the bulbs cool. Plant bulbs 6–8" deep, 6" apart in rich slightly acid well-drained soil.

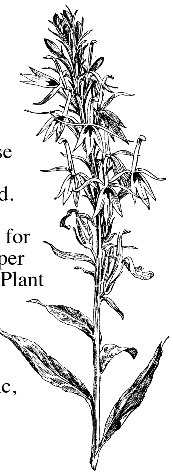


Legendary Lilies Fragrance Collection contains 3 **Oriental** varieties. The classic favorite **'Casa Blanca'**—pure white with textured white specks and bobbing russet anthers. Delectable **'Dizzy'** whose white flowers have contrasting radiant rose-red centerlines brushed along the length of each petal. And finally the rare double-blooming beauty **'Thalita'**—classic pink with crimson spotting at the center. Height range within this collection: 30–44" tall. Each variety will be individually bagged and labeled by name. Z3. ($1\frac{3}{4}$–2" bulbs)

***L724A**: 3 for $6.50*
***L724B**: 6 for $11.40*
***L724C**: 12 for $20.50*

***L. tigrinum* 'Citronelle' Tiger Lily** Robust variety produces scads of luminous lemon-yellow flowers with recurved petals generously flecked with dark purple dots. Prominent rusty-red anthers produce a beautiful mahogany pollen. Tiger lilies are distinguished by purplish-black bulbils in the leaf axils along the stem. When the plant is happy, the bulbils will drop and sprout baby lilies by the score. 2–5' tall. Z2. ($1\frac{1}{2}$–$1\frac{3}{4}$" bulbs)

***L726A**: 3 for $6.50*
***L726B**: 6 for $11.40*
***L726C**: 12 for $20.50*



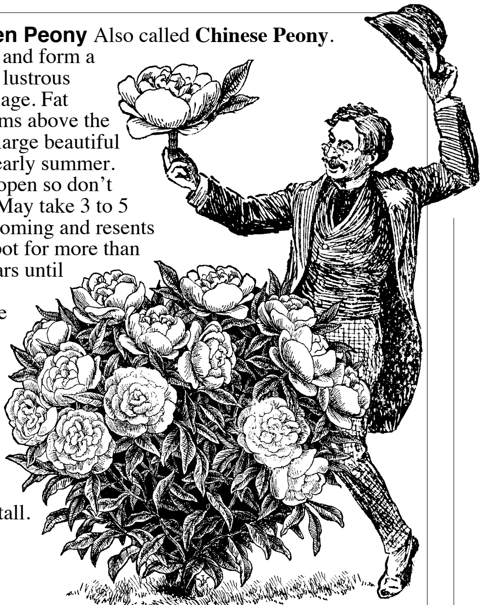
***Lobelia cardinalis* Cardinal Flower** In early spring this gorgeous North American native forms deep green rosettes, which produce tall green to burgundy-tinted stems with alternate lance-shaped leaves. Long tubular scarlet flower spikes are irresistible to hummingbirds and butterflies because each tube has a pool of nectar at its base. Habitat loss and thoughtless picking can spell disaster for this plant in the wild. Considered a short-lived perennial, Lobelia will naturalize beautifully and reseed year after year. depending on its seeds for survival. Healthy plants can produce several thousand seeds per stem, which will germinate well only on damp open ground. Plant along the riverbank and streambed, edges of bog, in the perennial border or in the meadow. Once established it is absolutely stunning. Best planted in light shade to full sun in *consistently moist soil*. Mulch to reduce weed competition in the first year. 4' tall. Our stock is MOFGA-certified organic, grown by the conscientious folks at Ripley Farm in Dover-Foxcroft. Z3. **ME Grown.**

***L727A**: 1 for $7.25*
***L727B**: 2 for $12.50*
***L727C**: 3 for $16.75*

***Nepeta faassenii* 'Walker's Low' Catmint** Aromatic grey-green foliage with long arching stems topped by lavender-blue flowers provides an eye-catching show of color nearly all summer. Creates a strong dependable low-growing hedge along any garden path. Flowers attract bees, butterflies, hummingbirds and human admiration. 2007 Perennial Plant of the Year. Cut back in midsummer to encourage steady blooms. Likes hot and dry, but will grow in any well-drained soil, full sun to part shade. 2–3' tall despite its name. Z3.

***L728A**: 1 for $6.75*
***L728B**: 3 for $17.25*
***L728C**: 6 for $31.00*

***Paeonia lactiflora* Garden Peony** Also called **Chinese Peony**. Red shoots appear in spring and form a bushy clump, about 3x3', of lustrous dark green deeply lobed foliage. Fat spherical buds on sturdy stems above the foliage gradually open into large beautiful flowers from late spring to early summer. (Ants may help the buds to open so don't discourage their presence.) May take 3 to 5 years to establish before blooming and resents being disturbed or left in a pot for more than one winter. Wait several years until the plants have many stems (therefore many eyes) before dividing. Z3.



***P. l.* 'Gay Paree'** Fragrant cerise-pink outer guard petals surround a creamy white center. Long-lasting elegant Japanese-type blooms make this a prime choice for cutflowers. Mid-to-late season. 18–36" tall. **ME Grown.** (2–3-eye stock)

***L729A**: 1 for $7.50*
***L729B**: 2 for $14.00*
***L729C**: 3 for $19.00*

***P. l.* 'Karl Rosenfield'** Dark velvety crimson inclining to purple. A marvelous double flower of rare beauty, clear and brilliant, immense in size, globular and solidly built. Blooms in clusters on strong erect stems. A magnificent, showy and attractive variety worth traveling miles to see when in full bloom. Midseason. 28–33" tall. (2–5-eye stock)

***L730A**: 1 for $10.50* ***L730B**: 2 for $18.00* ***L730C**: 3 for $24.00*

***P. l.* 'Moon River'** Delectable double cream-colored blossoms with a lovely light pink blush. Blissfully fragrant 8" flowers are near perfect in form and one of the most popular for wedding bouquets. Midseason blooms. 28" tall. (2–5-eye stock)

***L731A**: 1 for $22.50* ***L731B**: 2 for $38.75* ***L731C**: 3 for $50.00*

***P. l.* 'Pink Hawaiian Coral'** A symphony of coral, peach, melon and pink shades in semi-double form. Mature plants will show all shades at once on fragrant cup-shaped blooms. Early. 36" tall. (2–5-eye stock)

***L732A**: 1 for $9.75* ***L732B**: 2 for $17.00* ***L732C**: 3 for $23.00*

Garden Peonies Planting Guide

- **Peonies prefer:** full sun to part shade, and rich fertile well-drained soil
- **Recommended soil amendments:** compost, bone meal, azomite
- **Plant rootstock** 2–3' apart with the eyes no more than $1^{1}/2$" below the soil
- **Peonies require support** to prevent heavy flowers from flopping.
- **Autumn plant care:** Cut back to just above ground level to allow a fresh start in spring. Amend soil with compost around the base of the plant.

***Paeonia suffruticosa* Japanese Tree Peony** Also known as **Moutan**. Extravagantly big flowers with loose satiny petals bloom in early June before garden peony. Full sun promotes fastest growth but also fades the flowers, which do best in dappled shade. Prefers well-drained neutral to slightly alkaline soil. Plant them deep, the graft union 3" below soil surface, to encourage fresh roots and basal shoots. Overwatering is the most common cause of failure—monitor moisture inputs carefully for the first few growing seasons. Two-year-old grafted plants may need 1–2 years to mature before blooming begins. 48–60" tall. *Supplies limited—order early!* Z4.

***P. s.* 'High Noon'** Fragrant semi-double bright clear yellow blossoms span 6–9" across with red flares in the centers.

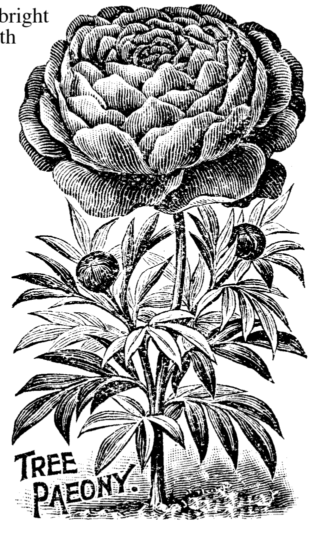
***L733A**: 1 for $33.25*
***L733B**: 2 for $58.00*
***L733C**: 3 for $78.00*

***P. s.* 'Kinkaku'** Fully double blooms of yellow petals with orange edges, create an overall orange effect.

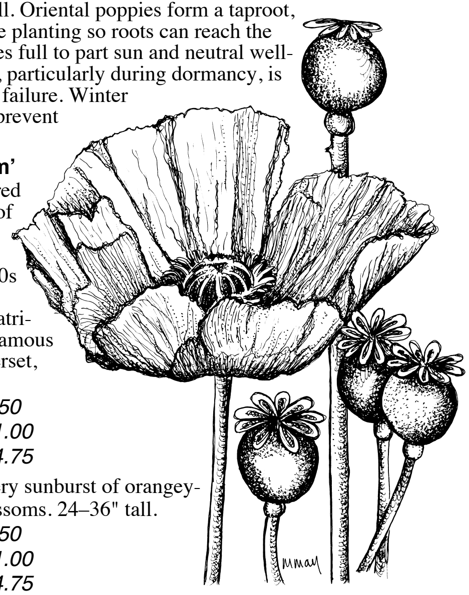
***L734A**: 1 for $39.50*
***L734B**: 2 for $68.50*
***L734C**: 3 for $92.50*

***P. s.* Maroon Tree Peony** Profusion of semi-double deep maroon blooms with yellow stamens.

***L735A**: 1 for $36.75*
***L735B**: 2 for $64.00*
***L735C**: 3 for $86.25*


TREE PAEONY.

***Papaver orientale* Oriental Poppy** Breathtaking clump-forming perennials with finely cut bristly frosty-green leaves and shimmering crepe-paper blossoms that give way to unique signature seedpods that are an essential component in late-season bouquets and dried arrangements. The entire plant goes summer-dormant—don't be alarmed when the leaves turn brown in early summer and disappear almost entirely by August. Basal mats of new leaves will appear in the fall. Oriental poppies form a taproot, so loosen soil deeply before planting so roots can reach the cool soil with ease. Requires full to part sun and neutral well-drained soil. Overwatering, particularly during dormancy, is the most common cause of failure. Winter mulch is recommended to prevent heaving. Z3.



***P. o.* 'Little Patty's Plum'** Dusky damson-plum–colored blossoms. A short version of the original Patty's Plum Poppy, a compost-pile surprise discovered in the 1990s by gardener Sandra Pope. Named for plantswoman Patricia Marrow, owner of the famous Kingsdon Nursery in Somerset, England. 20" tall.

***L736A**: 1 for $6.50*
***L736B**: 2 for $11.00*
***L736C**: 3 for $14.75*

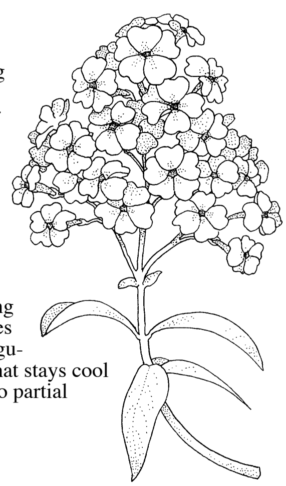
***P. o.* 'Turkenlouis'** A fiery sunburst of orangey-red fringed and ruffled blossoms. 24–36" tall.

***L737A**: 1 for $6.50*
***L737B**: 2 for $11.00*
***L737C**: 3 for $14.75*

***Perovskia atriplicifolia* Russian Sage** Blooms in midsummer with elegant slender spires of lavender-blue tubular flowers. Finely divided grey-green leaves are aromatic when crushed. Perovskia has one of the longest bloom times of any blue-flowered plant. Semi-woody shrub emerges slowly in spring; cut back after frost. Tolerates drought, loves heat and full sun, can't bear standing water. Likes to spread out once it gets established and it is so beautiful it deserves every foot of space it can get! Plant 24–36" apart. Grows 36–48" tall. I suspect that Zone 4 reports of winterkill are from poor drainage rather than cold, so a cautious Z4.

***L738A**: 1 for $6.75*
***L738B**: 3 for $17.25*
***L738C**: 6 for $31.00*

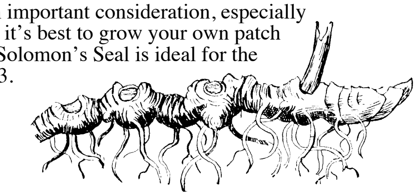
***Phlox amplifolia* 'Goliath'** Giant spreading clusters of fragrant lilac-purple flowers with starry white spokes and dark eyes. The flower heads are twice the size of any phlox we've seen! Produces showy long-blooming flowers in mid to late summer when so many blooms are fading, and satiny panicles when so many blooms are coarse. Wonderful color and fragrance for accents, border or naturalized area. Attracts butterflies and hummingbirds. Essential component of late-summer wedding bouquets. Extend flowering season by watering and prompt deadheading. Goliath demonstrates excellent mildew resistance. Benefits from regular sidedressing and prefers humus-rich soil that stays cool and moist in summer. Plant 2' apart, full sun to partial shade. 26–30" tall. Z3.



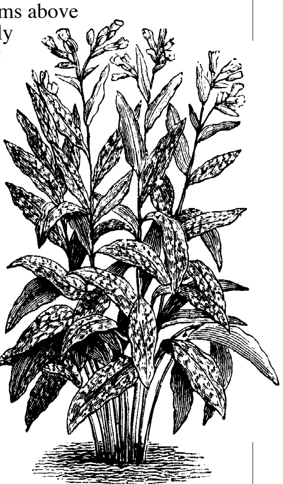
***L739A**: 1 for $5.75*
***L739B**: 2 for $10.00*
***L739C**: 3 for $13.00*

***Polygonatum biflorum* Solomon's Seal** Clumps of 3' long graceful arching stems with long narrow alternate leaves. Greenish-white bell-shaped tubular flowers dangle in rows along the stems in late spring and become small round blue-black fruits in early fall. Native Americans used the root tea for ailments of stomach and lung and for general debility, and used washes from the root for external injuries. Western herbalists use the root as a connective tissue anti-inflammatory and to strengthen weak joints and ligaments. Don't confuse it with False Solomon's Seal, which has a plume-like flower at the *end* of the stem. As herbalist Jim McDonald points out, in the woods "there's always more False Solomon's Seal than True, and this makes its ecological status an important consideration, especially when harvesting." Therefore, it's best to grow your own patch for making herbal remedies. Solomon's Seal is ideal for the shade or woodland garden. Z3.

***L740A**: 3 for $6.50*
***L740B**: 6 for $11.25*
***L740C**: 12 for $20.00*



***Pulmonaria* Lungwort** Brighten up your shade garden with this bold-textured woodland perennial. Pulmonaria blooms like a chameleon, with unique color-changing flower buds and blossoms above white-mottled green foliage. Presents a brilliant early season contrast to blooming daffodils and emerging hostas and ferns. Plant 1–2' apart in moist soil and full to partial shade. Grows 10–12" tall with a slow but steady spread of up to 2' wide. Z3.

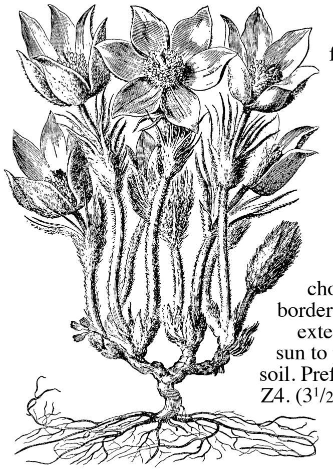


***P.* 'Mrs. Moon' Lungwort** Flower buds start out bright clear pink then shift over to periwinkle-blue. Large ovate slate-green leaves are dressed in vivid silver-white splotches. One of the most reliable classic varieties.

***L741A**: 1 for $4.00*
***L741B**: 3 for $10.00*
***L741C**: 6 for $17.50*

***P.* 'Rasperry Splash' Lungwort** Flower buds start out bright raspberry-pink then shift over to a lovely lilac-purple. Slender lance-shaped leaves with white splotches add elegant texture to the shade garden. (3" plug stock)

***L742A**: 1 for $8.50*
***L742B**: 2 for $15.00*
***L742C**: 3 for $20.00*



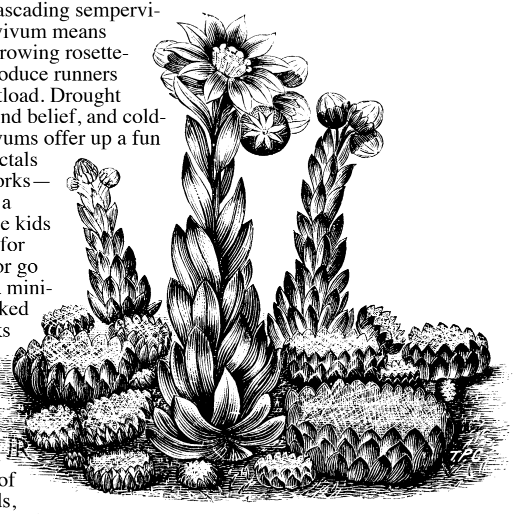
***Pulsatilla vulgaris* 'Rubra' Pasque Flower** Frosty-green fuzzy flower stems often emerge when patches of snow are still on the ground. Soon after, large open bell-shaped dusky burgundy flowers with golden-yellow stamens bloom as the finely cut furry ferny foliage begins to form. At bloom time flower stems are typically 4–5" tall but continue to grow after blooms have passed, eventually reaching heights of 9–12", with unique spherical clusters of feathery silvery seedheads. Excellent choice for rock gardens and the front of the border. With proper care it will develop a deep extensive root system. Plant 10" apart in full sun to part shade in rich *seriously well-drained* soil. Prefers not to be disturbed once established. Z4. ($3^{1}/_{2}$" plug stock)

***L743A**: 1 for $3.25*
***L743B**: 2 for $5.50*
***L743C**: 3 for $7.25*

***Sanguinaria canadensis* Bloodroot** Native spring **ephemeral**. Enchanting solitary $1^{1}/_{2}$" white flowers with 8–12 petals emerge from tightly rolled leaves. Low-growing grey-green leaves unfurl into an unmistakeable lobed and scalloped palm shape spanning 4–8" across. Flowers open at night and close during the day. Forms a colony over time and is worth the wait—bloodroot is one of the most handsome woodland plants in existence. Best planted en masse in moist rich well-drained shaded woodland soil, pH 5.5–6.5. Spreading underground rhizomes exude a somewhat caustic rusty-brown sap when cut. *Wash hands after handling*. Nursery propagated. Z3.

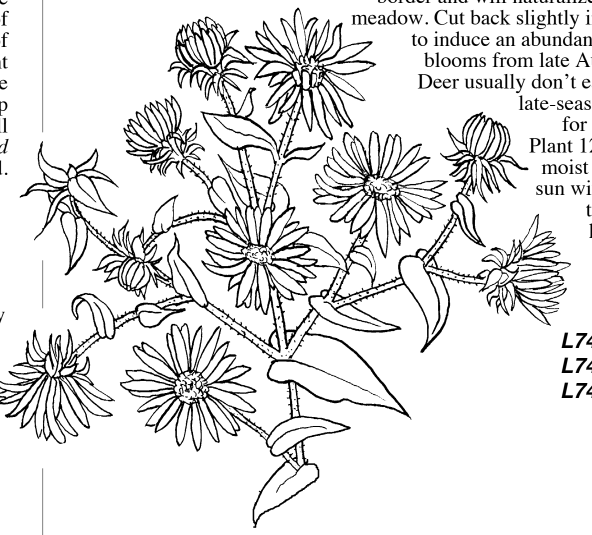
***L744A**: 3 for $11.00*
***L744B**: 6 for $18.50*
***L744C**: 12 for $30.00*

***Sempervivum* Hens and Chicks Mix** If you've got boulders in the back forty or a rocky sandy sun-drenched spot in the dooryard, you have the makings for an amazing cascading sempervivum display. Sempervivum means 'always alive'. Low-growing rosette-forming succulents produce runners and babies by the boatload. Drought and heat tolerant beyond belief, and cold-hardy, too! Sempervivums offer up a fun way to learn about fractals and how our world works—you can plant them in a strawberry pot with the kids for a fun easy-to-care for botany/math project, or go whole hog and build a mini-boulder palace all decked out in Hens and Chicks and mosses. Performs best in super-well-drained gravelly soil with lots of sun and dappled shade. We're offering a mix of varieties including reds, greens and purples. Z3. ($2^{1}/_{2}$" pots)



***L745A**: 1 for $3.50*
***L745B**: 3 for $8.50*
***L745C**: 6 for $15.00*

***Symphyotrichum novae-angliae* New England Aster** North American native with freely branching sprays of brightly colored flowers decorate the autumn landscape throughout the Northeast. Colors range from blue-purple to lavender-pink with yellow eyes. Asters add hardy grace to the back of the wild border and will naturalize on banks or in the meadow. Cut back slightly in early to mid June to induce an abundance of $1^{1}/_{2}$–2" rayed blooms from late August into October. Deer usually don't eat them. Provides a late-season source of nectar for hungry pollinators. Plant 12–18" apart in light moist humusy soil in full sun with good air circulation. Reaches grand heights of 4–6' tall! MOFGA-certified organic. Grown at Ripley Farm. Z3.



ME Grown.

***L746A**: 1 for $4.50*
***L746B**: 3 for $11.25*
***L746C**: 6 for $20.25*

Woodland Wildflowers and Biological Seed Dispersal

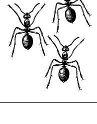
Elaiosomes, fleshy fat-packed packages that surround the seeds of plants like Bloodroot, Trillium and Wild Ginger, serve as an essential food crop for hard-working hungry ants that grab them up and carry them off for dinner. Ants will devour the rich fatty elaiosome and leave viable seed behind anywhere from a few to 30 feet away from the mother plant. Some types of ants are too small to lift the seeds in one piece so they chomp away at the delectable dish and carry off the pieces one by one.

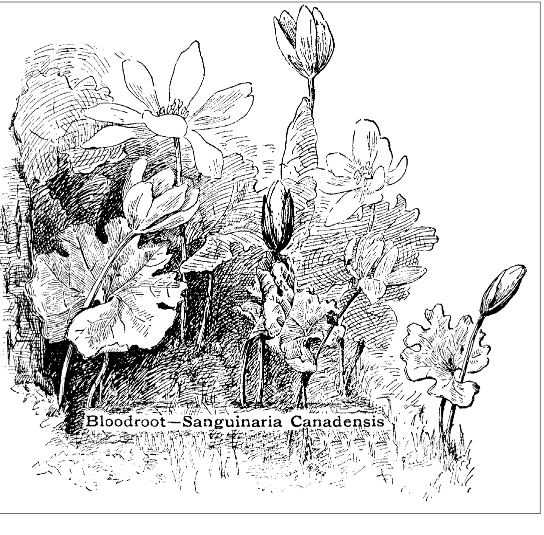
Bloodroot seeds ripen in late spring to early summer. When the pods begin to shift from green to yellow, the seeds inside are most likely brown and ready to make a life somewhere new once the fleshy elaiosomes have been removed.

Trillium seeds ripen roughly 10 weeks after flowering in mid-to-late summer. Hang out next to your Trillium patch with a camera and see if you can capture the amazing process of seed dispersal. When an ant drops a Trillium seed it can remain viable in the soil for roughly 3 to 5 years—so keep your eyes peeled. Get to know your wildflowers and be in awe of how long it can take to create a new plant.

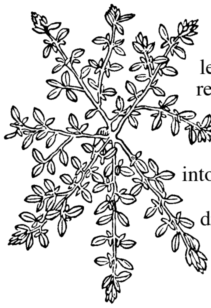
Wild Ginger develops seed-filled fruits that split open in early spring releasing ripe seeds into a squishy pulpy mess. Ants arrive on the scene and snatch the seeds to take back to their nests to eat the oily elaiosomes.

Rare and Threatened plants: *Trillium grandiflorum* and Wild Ginger are both on Maine's threatened species list, and although Bloodroot is not on the list, it is still pretty rare to find a large native colony. Learning about and planting these amazing natives will help counter the grand-scale habitat conversion that is so quickly destroying our natural woodland environments.



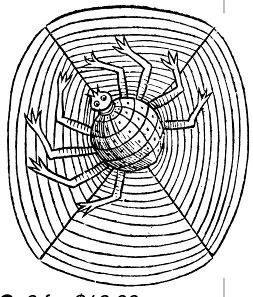


Bloodroot—Sanguinaria Canadensis



***Thymus praecox* 'Coccineus' Red Creeping Thyme** Dense flat mats of dark fragrant evergreen leaves are quickly blanketed in outstanding magenta-red flowers. One of the most rewarding groundcovers I've ever planted—each year it fills in the blank spots between the chives and sage in my herb beds and is now beginning to politely root itself into the garden pathways. The bees can't get enough of it and neither can I. Plant in full sun, in moist well-drained soil. Grows 2–4" tall. Z3.

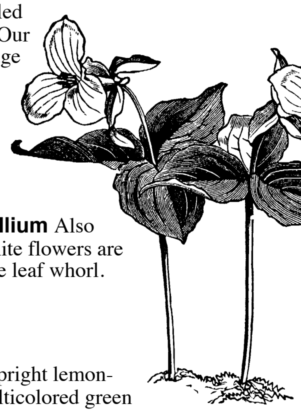
***L747A**: 1 for $6.50*
***L747B**: 2 for $11.50*
***L747C**: 3 for $15.50*



***Tradescantia* x *andersoniana* 'Concord Grape' Spiderwort** Grows in clumps with blue-green grass-like foliage and stems topped with spider-like clusters of buds that open to pretty 3-petaled triangular rich purple flowers with delicate yellow stamens. Blooms for 8 weeks from late spring throughout the summer. The parent species are hardy North American natives adapted to moist woodland edges, meadows and prairies. Perfect for the woodland garden as it thrives under trees; also attractive by a pond or stream. Part to full shade. Will tolerate damp areas. 15–18" tall. Z3.

***L748A**: 1 for $3.50* ***L748B**: 3 for $9.00* ***L748C**: 6 for $16.00*

Trillium Classic native wildflower will gradually build a quiet woodland colony if allowed to grow in peace. Spreads by seed and underground rhizomes. Grows in moist rich woods, full or part shade, from Nova Scotia to the mountains of Georgia, west into Michigan. 8–18" tall. Z4.



***T. erectum* Red Trillium** Also called **Stinking Benjamin** or **Wakerobin**. Our local wildflower preserve features huge patches of these velvety-soft maroon flowers. A spectacular and pleasing sight.

***L749A**: 3 for $11.00*
***L749B**: 6 for $18.50*
***L749C**: 12 for $30.00*

***T. grandiflorum* Great White Trillium** Also known as **Wood Lily**. Large pure white flowers are perched on a pedicel (stalk) above the leaf whorl.

***L750A**: 3 for $11.00*
***L750B**: 6 for $18.50*
***L750C**: 12 for $30.00*

***T. luteum* Yellow Trillium** Tiny upright lemon-yellow flower petals sit on top of multicolored green sessile leaves mottled with silver.

***L751A**: 3 for $11.00* ***L751B**: 6 for $18.50* ***L751C**: 12 for $30.00*

Orchard Companion Collections

We've created three specialized collections to help you support the fruiting trees and shrubs in your orchard. Companion plants encourage natural processes that benefit the overall health and vitality of all the life forms that make their home in your backyard. This means less work lugging around sprayers, buying fertilizers, and worrying about pollination.

Orchard Companions Key:

Beneficial Insect Attractors contain nectar sought by predatory insects like brachonid wasps, syrphid flies and lacewings that eat fruit tree pests.

Mineral Accumulators have long taproots that can bring up minerals from deep subsoil. Cut foliage and mulch around trees throughout the season to create nutrient-rich soil.

Living Mulches produce large quantities of organic matter that can be cut back to decompose around tree bases, enriching the soil.

Native Pollinator Plants are native to North America and attract native pollinators.

Nitrogen Fixers transfer nitrogen from the air to the soil where it can be absorbed by tree roots.

Pest Confusers have bitter aromas that confuse insect pests and deter them from eating fruit.

Beneficial Insect Attractors Orchard Companion Collection

Create an open invitation for pollination in your orchard by planting herbs and flowers rich with nectar sought by positive predatory insects. Collection contains 2 of each variety for a **total of 6 bare-root crowns**.

Baptisia australis Native pollinator plant and beneficial insect attractor. See full description on p. 57.

Echinacea purpurea Beneficial insect attractor. Native pollinator plant. See full description on p. 64.

***Hyssopus officinalis* Hyssop** Beneficial insect attractor. Aromatic pest confuser with bitter aroma, long used as a companion plant in gardens and orchards. Spreading groundcover. See full description on p. 65.

***L774A**: BIA Collection, 6 plants for $38.00*

Groundcovers Orchard Companion Collection

Build the best of both worlds by planting low-growing spreading groundcovers that also attract beneficial insects. Contains 3 of each variety for a **total of 9 bare-root crowns**.

***Alchemilla mollis* Lady's Mantle** Beneficial insect attractor. Low-growing spreading groundcover. See full description on p. 64.

Arnica chamissonis Beneficial insect attractor. Low-growing spreading groundcover. See full description on p. 64.

***Geranium maculatum* Wild Geranium** Beneficial insect attractor. Native pollinator plant. Low-growing spreading groundcover. See full description on p. 59.

***L775A**: GOC Collection, 9 plants for $35.00*

Living Mulches Orchard Companion Collection

Plant living mulches in the orchard to produce large quantities of organic matter that can be cut back annually and left to decompose around the base of your trees, enriching the soil for years to come. Plants in this collection are MOFGA-certified organic, grown at Ripley Farm in Dover-Foxcroft. Contains 2 of each variety for a **total of 6 bare-root crowns**.

***Achillea millefolium* Yarrow** Living mulch and native pollinator plant. Rich in copper, nitrogen and phosphorus. Aromatic pest confuser with bitter aroma. Excellent addition to compost piles. See full description 64.

***Monarda fistulosa* Wild Bergamot or Bee Balm** Living mulch. Beneficial insect attractor. Native pollinator plant. Full description on p. 65.

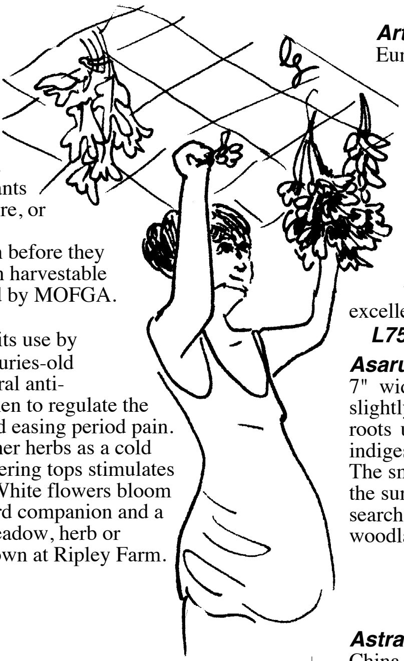
***Symphytum* x *uplandicum* 'Bocking 14' Russian Comfrey** Beneficial insect attractor, mineral accumulator and living mulch. Rich in silica, nitrogen, magnesium, calcium, potassium and iron. Use as mulch or turn the leaf into compost tea for your garden; makes a mineral-rich foliar spray. Nearly impossible to eradicate: plant it where you want it forever, 4–15' from tree trunks. Root cuttings.

***L776A**: LM Collection, 6 plants for $37.50*

Herbaceous Medicinals

The following plants have long histories of traditional medicinal use. It's up to you to educate yourself about the safety and efficacy of using plants for medicinal purposes. The statements in our catalog regarding traditional medicinal uses of plants have not been evaluated by the FDA. The plants we sell are not intended to diagnose, treat, cure, or prevent any disease.

Plants may take a year or more to establish before they flower; roots often take several years to reach harvestable maturity. The organic listings are all certified by MOFGA.



***Achillea millefolium* Yarrow** Named for its use by Achilles to staunch battle wounds, has a centuries-old tradition of use as an external styptic. A natural anti-inflammatory, yarrow has been used by women to regulate the menstrual cycle, reducing heavy bleeding and easing period pain. Yarrow is often used in combination with other herbs as a cold remedy and to reduce fever. Infusion of flowering tops stimulates healthy digestion and improves circulation. White flowers bloom June through September. An excellent orchard companion and a beautiful addition to the perennial border, meadow, herb or moon garden. MOFGA-certified organic, grown at Ripley Farm. 24" tall. Z3. **ME Grown.**

***L753A**: 1 for $6.50*
***L753B**: 2 for $11.25*
***L753C**: 3 for $15.25*

Actaea racemosa* Black Cohosh** Also known as **Black Snakeroot** or **Fairy Candles**; formerly known as ***Cimicifuga racemosa. Provides the ultimate backdrop for the lightly shaded woodland garden. From late July into August, long arching racemes of creamy white and gold serpentine flower spikes soar 6–10' over a 3–4' mound of fine-textured green compound foliage. Diuretic and anti-inflammatory. Anti-spasmodic for cramps, pains, cramped nerves and emotions, included in many premenstrual and perimenopausal formulas. Roots contain salicylic acid. *Pregnant women avoid.* Prefers part shade, but tolerates full sun in deep moist soil. Grows well in boggy spots. Develops large clumps of rootstock so give it room to spread. Plant 3' apart in rich moist soil, part sun, part shade. Our stock is sustainably grown by Joanna Linden at Shooting Star Farm in Canaan. Z3. **ME Grown.**

***L754A**: 1 for $8.25* ***L754B**: 2 for $13.75* ***L754C**: 3 for $18.75*

***Alchemilla mollis* Lady's Mantle** Enchanting tiny fans of leaves emerge in early spring and unfold into a mound of rounded fan-creased silvery grey-green foliage. Sprays of tiny yellow-green stars bloom on 15" tall stalks above the foliage. Most herbals list the medicinal variety as *A. vulgaris*; ornamental growers list this very similar species as *A. mollis* in this botanically bewildering genus. *A. vulgaris* tends toward a looser more spreading habit than the tighter more upright *A. mollis*. Both varieties have traditionally been used as a poultice to tone and firm breast tissue and to promote fertility. Lady's Mantle has a new claim to fame as an orchard companion plant. When planted at the base of old apple trees, this shade-loving plant attracts hordes of beneficial insects and acts as a beautiful low spreading groundcover. 12–18" tall. Z3.

***L755A**: 1 for $3.75* ***L755B**: 3 for $8.50* ***L755C**: 6 for $15.50*

***Althaea officinalis* Marshmallow** Small delicate lavender-white flowers with darker lavender stamens appear up and down the stalks of this beautiful towering medicinal plant. I've been drawn to marshmallow ever since I watched herbalist Deb Soule rub its soft velvet leaf against her cheek and explain how much the ruby-throated hummingbird appreciates the nectar of marshmallow flowers. The leaf, flower and mucilagenous roots are traditionally used to soothe the mucous membrane linings of the lungs and digestive tract, and to calm the lining of the urinary tract. Leaf is best used *fresh* for tea, and the dried roots are best when soaked overnight in cool water for tea. Harvest 4-year-old roots for medicinal use. Wonderful in a hedgerow and magnificent planted with black cohosh as they often blossom together in late July and into August. Readily self-sows. Plant 1–2' apart in light moist soil, part sun, part shade. 5–8' tall. Our certified-organic stock is grown at Ripley Farm. Z4. **ME Grown.**

***L756A**: 1 for $7.50* ***L756B**: 2 for $12.75* ***L756C**: 3 for $17.25*

Arnica chamissonis Spreading groundcover with bright yellow daisy-like flowers used externally in oils and salves to treat bruises, sprains and inflammation. Never take internally except in homeopathic doses. In the right conditions a few plants will develop into a dense long-lived patch. Blooms in July. Grows successfully in our climate and is a generally accepted substitute for *A. montana*. Plant in full sun 1' apart in moist well-drained soil. Lauren Cormier sustainably grew these North American natives. Z3. **ME Grown.**

***L757A**: 1 for $7.50*
***L757B**: 2 for $12.75*
***L757C**: 3 for $17.25*

***Artemisia absinthium* Wormwood** Aromatic bitter herb native to Europe. Traditionally used as a digestive stimulant, mild antidepressant, potent insect repellent, and treatment for intestinal parasites. Beautiful branching shrub-like woody plant with tall stiff stems and alternate finely cut silvery-grey-green leaves covered with silken white hairs. Useful as an orchard companion—foliage has a strong sage-like scent and acts as an aromatic pest confuser. Adds a frosty color to the back of a perennial border. Notorious as the source of absinthe, an addictive and controversial drink, wildly popular in the 19th c. Legal contention swirls around the thujone content in drinks and herbal preparations flavored with wormwood essential oil, which is known to be safe only in minute doses and potentially toxic in excess. Deadhead to prevent unwanted self-seeding. Thrives in full sun and poor dry soils. Requires excellent drainage. Grows 3' tall. *Cannot ship to CO, ND, or WA.* **ME Grown.**

***L758A**: 1 for $6.50* ***L758B**: 2 for $11.25* ***L758C**: 3 for $15.25*

***Asarum canadense* Canadian Wild Ginger** Heart-shaped leaves up to 7" wide will spread into a beautiful groundcover. Leaves are large and slightly fuzzy, not small and glossy like the European species. Aromatic roots used like other gingers for their warming qualities and for soothing indigestion, coughs, colds and motion sickness. Grown for roots and foliage. The small reddish-brown urn-shaped flowers grow near the soil surface or in the surface leaf mold to be pollinated by crawling insects. Flowers are fun to search for but won't decorate your landscape. Requires shade and moist rich woodland soil. 6–12" tall. Z3.

***L759A**: 3 for $8.25*
***L759B**: 6 for $14.25*
***L759C**: 12 for $25.50*

***Astragalus membranaceus* Chinese Milk Vetch** Root is *huang qi* in China. Deep-rooted leguminous plant forms an upright bush with many stems, each thickly covered with tiny pinnate leaves and small arching racemes bearing rows of whitish-yellow flowers. This important Chinese medicinal, when used over many months, is known to rebuild the immune system while combating exhaustion. Long-term tonic use is believed to increase stamina and improve resistance to cold temperatures. Harvest 4- to 6-year-old roots in fall. Plant in full sun, 12" apart in deep gravelly well-drained soil. 18–36" tall. Our certified-organic stock is grown at Ripley Farm. Z4. **ME Grown.**

***L760A**: 1 for $8.75* ***L760B**: 2 for $15.00* ***L760C**: 3 for $20.25*

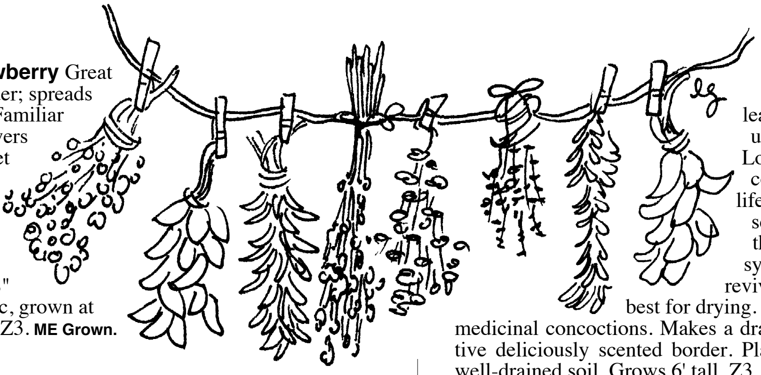
Echinacea North American native plants often over-harvested in the wild and in need of active cultivation in our gardens. Tolerates wind, heat and drought once established. Will reseed abundantly. Plant 20–30" apart in full sun and light sandy soil. Medicinal benefits vary amongst the different varieties of Echinacea. *E. purpurea* and *angustifolia* are still considered the standard for making medicinal tincture. *E. paradoxa* does share some of the same immune-stimulating compounds as *purpurea* but in our opinion is best planted for the birds and the bees as a complement to your *purpurea* patch. 3–5' tall. Both are **ME Grown.**

***E. paradoxa* Yellow Coneflower** Bright pure-yellow flowers with drooping petals surround spiky dark brown seed cones—irresistible to gobbling goldfinches! Native to the Ozark Mountains and surrounding areas. MOFGA-certified organic, grown at Ripley Farm. Z3.

***L761A**: 1 for $7.25* ***L761B**: 2 for $12.75* ***L761C**: 3 for $17.25*

***E. purpurea* Purple Coneflower** Seedheads are a beautiful coppery yellow-brown surrounded by a single row of reflexed lavender-purple petals. Sustainably grown at Shooting Star Farm. Z3.

***L762A**: 1 for $7.25* ***L762B**: 2 for $12.75* ***L762C**: 3 for $17.25*



***Fragaria vesca* Alpine Strawberry** Great for edging walkway, bed or border; spreads by runners that root as they go. Familiar compound leaves and white flowers are followed by petite juicy sweet rich red berries from late spring till fall. Leaves are considered blood purifying and diuretic in European folk tradition. Plant in full sun, 8–12" apart in slightly acid moist well-drained soil. 4–8" tall. Our stock is certified organic, grown at Ripley Farm in Dover-Foxcroft. Z3. **ME Grown.**

***L763A**: 1 for $6.50*
***L763B**: 3 for $17.00*
***L763C**: 6 for $30.50*

***Glycyrrhiza glabra* Licorice** Sweet and soothing roots contain glycosides similar to the body's own natural steroids. Beneficial for revitalizing adrenal glands, good for colds and bronchitis, reduces throat irritation, yet acts as an expectorant and anti-spasmodic. Adds sweetness, harmony and palatability to nearly every herbal combination. Give it lots of room and keep it weeded so it can create the roots and runners you want. Roots penetrate deeply and take complete possession of the soil. Runners sometimes travel great distances before sending up a shoot—if the soil is loose you can pull up errant runners, coiling them like rope to hang in wreaths above the woodstove, convenient for winter teas. Leguminous plant fixes nitrogen in the soil. You can plant small vegetables like onions, lettuce and beans in the intervening spaces during the first and second year of growth. Prefers sandy well-drained soil. Mulch to prevent heaving. Roots attain harvestable size in 3 to 4 years. Grows 3–4' tall. Our stock is certified organic, grown at Ripley Farm. Z4. **ME Grown.**

***L764A**: 1 for $7.25* ***L764B**: 2 for $12.75* ***L764C**: 3 for $17.25*

***Hydrastis canadensis* Goldenseal** Native to Eastern hardwood forests. Plants have upright stalks, typically forked into two stems, each with a deeply incised dark green leaf with 5–7 lobes and toothed edges. A unique white flower with a dozen or so pistils appears above the foliage in spring and matures into a raspberry-shaped red berry that typically contains one or two shiny black seeds. Requires moist cool woodland soils and deep shade. Harvest root after seeds ripen in fall. Powerful medicinal is at risk of over-harvesting in the wild. 6–12" tall. Nursery propagated. Z3-6.

***L765A**: 3 for $16.25* ***L765B**: 6 for $28.00* ***L765C**: 12 for $50.00*

***Hyssopus officinalis* Hyssop** Vivid blue-violet double-lipped flowers on spikes blossom from June through September. Infusions of the pleasantly skunky dark green leaves and flowering tops are traditionally used as tea or made into syrup to ease digestion and treat chronic respiratory infections after they have peaked. Hyssop increases the production of liquid mucus and acts as an expectorant. Thrives in dry soil, useful on slopes and any sunny difficult place. Makes a beautiful hedge that will draw bees from far and wide. 12–20" tall. Plant 12–24" apart in poor soil, full sun to light shade. Sustainably grown by Lauren Cormier. Z3. **ME Grown.**

***L766A**: 1 for $7.25* ***L766B**: 2 for $12.75* ***L766C**: 3 for $17.25*

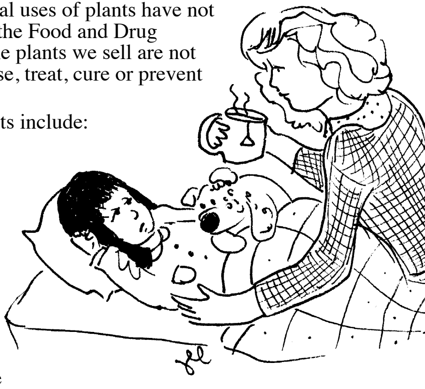
***Lavandula angustifolia* 'Munstead' Lavender** Considered the hardiest lavender with light lavender flowers. Sweet-scented flower spikes extend above aromatic silvery-green lanceolate leaves. Blooms all summer. Makes a nice border, rockery, slope or specimen plant. Compact habit lends itself to edging walkways. Traditionally used to calm nervous excitability and relieve muscle tension. Plant 12–24" apart in full sun, in moist *well-drained* soil. Mulch to prevent winter heaving. 16–18" tall. Z4.

***L767A**: 1 for $6.75* ***L767B**: 2 for $11.50* ***L767C**: 3 for $15.25*

Traditional Medicinal Use and the FDA

Aside from the medicinal plants listed on pages 64-65, you will find other plants throughout the catalog with references to common traditions of medicinal use. The statements in our catalog regarding traditional medicinal uses of plants have not been evaluated by the Food and Drug Administration. The plants we sell are not intended to diagnose, treat, cure or prevent any disease.

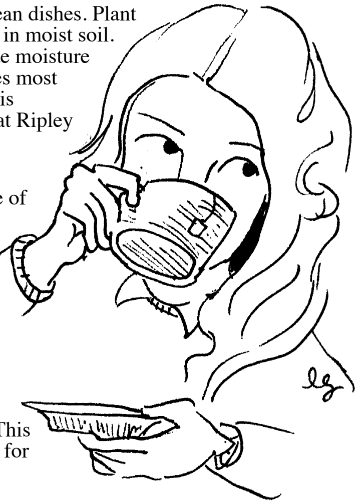
Some of these plants include:
Asclepias
Bearberry
Blueberry
Elderberry
Cranberry
Hawthorn
Hops
Rose
Solomon's Seal
Wintergreen
Witch hazel
Eastern White Pine



***Levisticum officinale* Lovage** Beneficial insect attractor. Glossy green leaves have a strong celery taste and can be used to flavor soups, stews and casseroles. Looks like a giant celery plant with toothed compound leaves, greenish-yellow umbelliferous flowers and small oval seeds. Crush seeds and add to bread and pastries; candy the stems and roots into a sweet medicinal syrup that is said to restore the appetite and revive the love of life. Second-year plants are best for drying. Formerly used to mask the bitter herbs in medicinal concoctions. Makes a dramatic architectural element in a decorative deliciously scented border. Plant full sun to part shade in rich moist well-drained soil. Grows 6' tall. Z3. *Pregnant women avoid.* **ME Grown.**

***L768A**: 1 for $7.25* ***L768B**: 2 for $12.75* ***L768C**: 3 for $17.25*

***Monarda* Bee Balm** Also called **Bergamot** or **Oswego Tea**. Beloved by bees, butterflies and one of the best hummingbird magnets nature has to offer! Wild and wily flowers form with tubular petals on pincushion heads borne above colorful bracts in July and August. Aromatic foliage. Good for borders, for wet areas and for cutting. Infusion of the aerial parts can be used to improve digestion by reducing flatulence. Delicious used as tea or added to meat and bean dishes. Plant crowns 16–20" apart in light shade in moist soil. Thrives in full sun if given adequate moisture or mulched with leaf mold; tolerates most conditions. All of this year's stock is MOFGA-certified organic, grown at Ripley Farm. Z3. Both are **ME Grown.**



***M. didyma* 'Panorama Reds'** Fabulous blooms in a diverse range of red shades destined to attract scads of butterflies and hummingbirds for your cats and kids to chase in vain. 3–4' tall.

***L769A**: 1 for $6.50*
***L769B**: 3 for $17.00*
***L769C**: 6 for $30.50*

***M. fistulosa* Wild Bergamot** Our native wildflower species with aromatic lavender blossoms. This is the variety most commonly used for medicinal purposes. 2–4' tall.

***L770A**: 1 for $6.50*
***L770B**: 3 for $17.00*
***L770C**: 6 for $30.50*

***Scutellaria baicalensis* Baikal Skullcap** produces monkshood-shaped indigo blooms with shiny green lance-shaped leaves. In traditional Chinese medicine, the root is called *huang qin* and is used to fight gastrointestinal infections and allergic conditions such as asthma, hay fever and eczema. To encourage the roots' optimal medicinal powers, pinch buds to prevent blooming, although this may prove challenging because the flowers are so beautiful. Roots attain harvestable size in 3 to 4 years. Plant in partial shade, 1–2' apart, in light well-drained soil. Grows 1–4' tall. Our stock is certified organic, grown at Ripley Farm. Z4. **ME Grown.**

***L771A**: 1 for $7.25* ***L771B**: 2 for $12.50* ***L771C**: 3 for $17.25*

***Symphytum officinale* Comfrey** Also called **Knitbone**. Well known for its skin-soothing properties. Contains allantoin, promotes healing of skin and bone; also demulcent for lung and throat. Clusters of bell-like pinkish purple flowers dangle above the deep green bristled foliage. Highly recommended as an orchard companion. Research on comfrey is inconclusive, but most agree that this species is the one to use medicinally. Easy-to-grow vigorous plant demands space and *can be very invasive*; be careful where you plant it and control with regular harvest. Space 16–24" apart in well-drained soil, sun or shade. 24–48" tall. Z3. **ME Grown.**

***L772A**: 1 for $4.50*
***L772B**: 3 for $11.25*
***L772C**: 6 for $20.25*

When Planting Comfrey
Choose a site that will never see a rototiller or you will live to regret it!

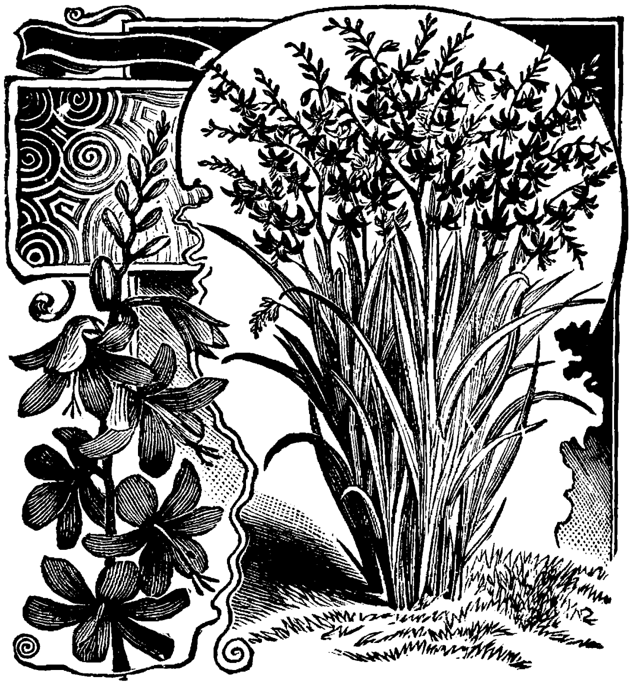
***Valeriana officinalis* Valerian** A strong and upright plant with small white or rosy flowers in flat clusters above glossy pinnate leaves. Roots traditionally used as an anti-spasmodic, nervine and sedative. Often used for sleeplessness, anxiety and other nervous complaints. Divide or harvest thick rootstock every 4 to 5 years. Plant 12–15" apart in moist well-drained soil in full sun. 2–4' tall. Z3. *We cannot ship to CT.* **ME Grown.**

***L773A**: 1 for $7.25* ***L773B**: 2 for $12.50* ***L773C**: 3 for $16.75*

Why is Fedco selling weeds? Comfrey, valerian, Rosa rugosa, blackberry, kiwi, horseradish. Some native, some not. Yep, they can become nuisances if we aren't careful. We weigh the pros and cons of each plant and aim to provide info that will help all of us to garden mindfully. Sometimes we learn something new in our evaluations and decide to take a plant out of the catalog. We hold on to others because we think they are amazing assets to our gardens, and with thoughtfulness they can be cultivated and contained.

Tender Summer Bulbs

Spring-planted bulbs offer wonderful variety to the cutflower market and are a staple in old-fashioned gardens. Once upon a time, back roads beckoned my mother to spend many a summer Sunday in search of the best deal on roadside dahlias, glads and lilies. Every few miles she would find buckets brimming with blooms for 10¢ a stem. Nowadays it's more like $1. Spring-planted bulbs are not hardy to northern climes. Smart and thrifty people lift and store them over the winter; the rest of us treat them as annuals.

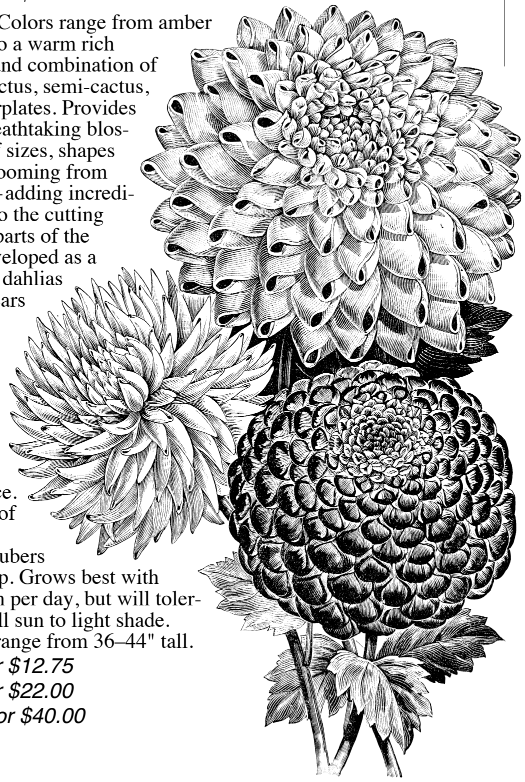


***Crocosmia* x *crocosmiiflora* 'Lucifer'** Just glows in the garden! Midsummer sprays of bright red flowers open from bottom to top on long arching bronze stems, like bursts of flame above gladiolus-like foliage. *Lucifer* is Dutch for 'match'. Grows well in pots. Makes a long-lasting cutflower. Plant in full sun, 3" deep, 3" apart in moist well-drained soil. 24–36" tall.

***L777A**: 10 for $4.00*
***L777B**: 20 for $7.50*
***L777C**: 50 for $15.00*

***Dahlia* Sunset Mix** Colors range from amber to coral, rose to ruby to a warm rich magenta-purple. A grand combination of solids and bicolors, cactus, semi-cactus, decoratives and dinnerplates. Provides endless displays of breathtaking blossoms in a vast array of sizes, shapes and colors, steadily blooming from midsummer till frost—adding incredible late-season value to the cutting garden. Native to hot parts of the Americas and first developed as a food crop, ornamental dahlias are descended from years of breeding and hybridizing *D. pinnata* and *D. juarezi*. To overwinter, dig tubers before the last frost, dry them off and store them in a well-ventilated cool (35–45°) dark dry place. In spring after danger of frost, plant 3–4" deep, 12–24" apart. Set the tubers flat with eyes facing up. Grows best with 3–4 hours of direct sun per day, but will tolerate conditions from full sun to light shade. Sizes in this mix will range from 36–44" tall.

***L778A**: 3 for $12.75*
***L778B**: 6 for $22.00*
***L778C**: 12 for $40.00*



***Gladiolus* Sword Lily** Showy summer bloomer excels as a cutflower. Each stalk is covered with 10 or more open funnel-shaped flowers that bloom from bottom to top. Named for their sword-like leaves; a *gladiolus* is a small Roman sword. Each stalk blooms for about a week, roughly 8 weeks after planting. 36" tall.

***G.* Blue Moon Mix** Brilliant blue-violet color combinations for your cutflower fantasies.

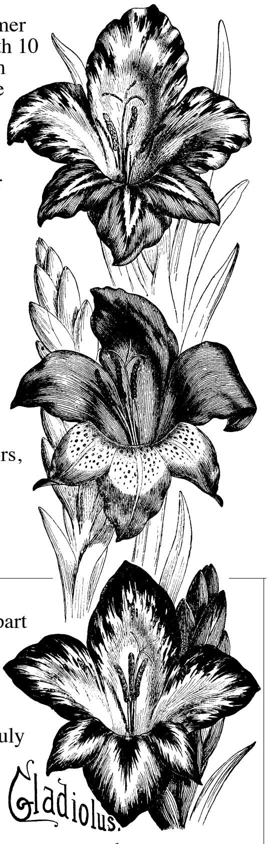
***L779A**: 10 for $6.00*
***L779B**: 20 for $10.25*
***L779C**: 50 for $23.00*

***G.* Ravishing Reds Mix** A rambunctious combination of red shades and variations.

***L780A**: 10 for $6.00*
***L780B**: 20 for $10.25*
***L780C**: 50 for $23.00*

***G.* Large-Flowering Glad Mix** A mercurial mix of colors, stripes, stipples, bicolors, tricolors, and everything else under the sun—what fun!

***L781A**: 10 for $4.00*
***L781B**: 20 for $6.75*
***L781C**: 50 for $15.25*



Gladiolus Planting Guide

- Plant corms in full sun 4–6" deep and 6–8" apart after the last spring frost.
- Stagger plantings for a long season of blooms: First planting in early to mid-May, then again every two weeks through mid June.
- This schedule will keep the flowers coming July through August.
- Hill or stake the corms at planting time to keep the plants from keeling over when the foliage and flower spikes get top heavy.
- Mulch with straw to retain even moisture and prevent weeds.
- Cut the stalks when 2–3 blossoms have opened, taking care to spare the leaves, which feed the developing corm.
- To overwinter: dig up the corms after the tops have died, discard the old one, clean the new one, allow it to dry off, and store them in paper bags in a well-ventilated cool (35–45°) dark dry place.

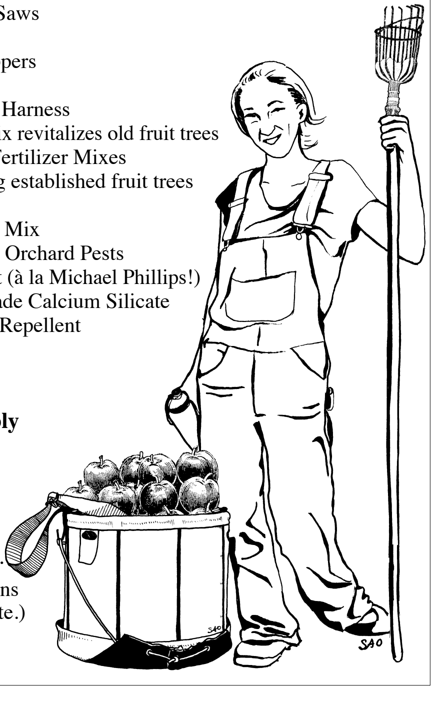
Top-Quality Orchard and Horticultural Supplies Available Year-round at Organic Growers Supply!

Come pick up supplies at our Organic Growers Supply warehouse on the Bellsqueeze Road in Clinton, ME, or order online at **fedcoseeds.com/ogs** or through our paper Seed catalog to have these orchard essentials shipped to you. We've expanded our selection to cover your orcharding needs.

- Grafting Tools & Supplies, including kits for grafting
- Pruning Tools & Sharpeners
- Felco Pruners & Pruning Saws
- Silky Pruning Saws
- Ratcheting Pruners & Loppers
- Telescoping Fruit Picker
- Deluxe Picking Bucket & Harness
- Ancients Rise Fertilizer Mix revitalizes old fruit trees
- Spring and Fall Planting Fertilizer Mixes
- Fruition Mix for fertilizing established fruit trees
- Fall Fruit Tree Prep Mix
- Hole-istic Spring Planting Mix
- Traps, Lures & Sprays for Orchard Pests
- Holistic Orchard Spray Kit (à la Michael Phillips!)
- Wollastonite—soluble-grade Calcium Silicate
- MoleMax Mole and Vole Repellent
- Neem & Karanja Oils
- And more!

Organic Growers Supply
and **Fedco Seeds**
warehouses are open
Tuesday,
Wednesday
and Thursday
from 9 to 3 year-round.

(Holidays & rare exceptions
will be noted on our website.)



PLANT IT NOW

When you get your order: Immediate Care

When your new trees and plants arrive, they need to be planted as soon as possible. Don't be deterred by snow. If you can dig a shovel into the ground, plant your trees. If you wait until spring is in full swing, your plants might become stressed and have a hard time recovering.

Sometimes frozen ground makes immediate planting impossible. When this is the case, follow the instructions below and all will be well. **Why do we send plants even when there is snow on the ground?** The weather may be fickle but we must be steady. We are dealing with bare-root trees that have to be moved out of storage before they break dormancy and sent to their new homes in early spring as they leaf out. For our system to work, we must follow a tight shipping schedule regardless of regional weather conditions.

We begin shipping around March 30 and finish around April 13, sending orders by climate zones, warmer zones first.

DO NOT ALLOW ROOTS TO DRY OUT AT ALL!!!

Planting Woodies Within 48 Hours

Leave the plastic wrapping around the root ball. Add some water to remoisten the packing material and store your trees and shrubs in a cool shaded place like a shed, barn or cellar. Avoid heat and sunlight.

If You Cannot Plant Within 48 Hours

You can keep plants for a week or two by following one of these temporary measures and continuing to water as needed.

- Open your package and inspect for damage. Fold the plastic back from around the tops. Keep the wet shredded newspaper around the roots and re-wrap the plastic around the root ball, packing firmly to eliminate air pockets. Water as needed to keep the roots moist, but don't let them stand in water. Keep the trees in a cool shaded or dark place like a shed, barn, cellar or garage but don't allow the plants to freeze. Avoid heat and sunlight.
- "Heel in" your plants in a protected cool, shady spot. Dig a trench or turn back an appropriate amount of earth and bury the roots; tamp firmly to remove air pockets. Water thoroughly. Plant as soon as possible.

Caring for Other Plants

Asparagus

Open up asparagus roots and store dry and uncovered in a cool shaded place.

Hops

Refrigerate slightly moistened rhizomes in a plastic bag until planting.

Horseradish & Rhubarb

Open package slightly to allow the plants to breathe. They should be fine left in their packaging and kept in a cool place (ideally 35–50°). They want to stay moist but not wet.

Mushroom Spawn

Refrigerate until ready to use.

Strawberries

We ship with the roots slightly on the dry side. If it's going to be a while until planting, mist the roots and re-cover. Refrigerate until you are ready to plant.

Perennials

Open bags and check the stock immediately. Roots and crowns should be firm and pliable, not squishy or brittle. If they are slightly dry, add a little water, or, if they are going to be potted up soon, wet the roots. Generally, a little surface mold is harmless and will not affect the plant's future performance. Pot up crowns and roots; **do not plant directly outdoors**. If you cannot pot the crowns up immediately, store them in a cool (35–40°) location for a short time. See page 55 for details.

Echinacea
Foxglove
HOSTA

TREE PLANTING AND CARE

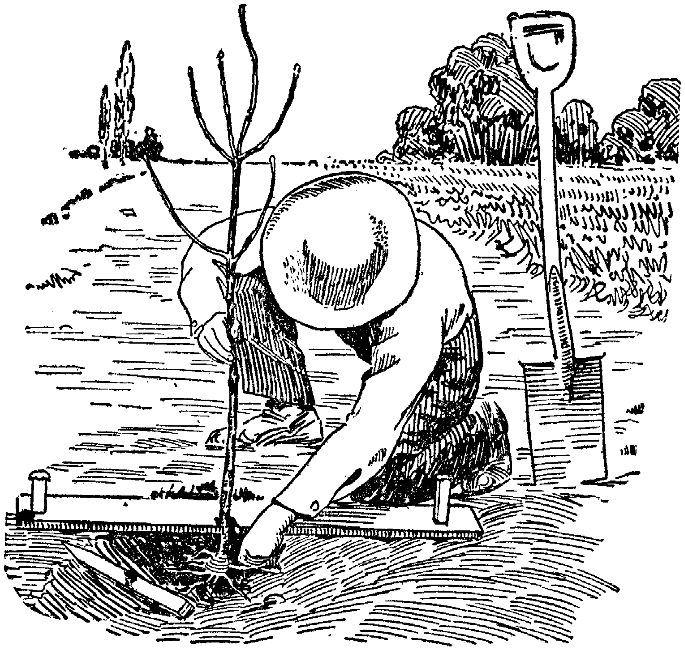
Choosing a Site for Fruit Trees and Berries

The best sites for fruit crops have well-drained fertile soils, protection from wind, good air drainage and full sun. A gentle slope and 6–8 hours of full sun per day is ideal. Good air flow will moderate frosts and fungal disease. If possible, avoid "frost pockets."

Sunny south- or west-facing slopes are not advisable for less hardy varieties. These slopes tend to warm up before the danger of frost has passed. Trees may flower prematurely and then be damaged by frost, causing loss of fruit. South and west slopes may also have widely fluctuating early spring temperatures that can damage less hardy trees.

Soil pH for fruit trees should be between 5.5 and 8.0, towards the lower end for apples, the higher end for peaches, and in the middle for others. Fruit species have optimal space requirements. See chart on page 69.

Do not plant trees where power lines will interfere with them.



Fall Preparation or Spring Initial Feeding for Fruit Trees

If you're interested in preparing locations for your trees this fall, or for feeding newly planted fruit trees, the following amendment recipe should address most sites in the eastern U.S., which tend to be acidic and moderate to low in calcium and phosphorus. You can apply this mix as a mulch to your newly planted tree in the spring. To order any of these products, refer to the **Organic Growers Supply** section of our Seeds catalog or website.

Deluxe Method

Without digging the hole, cover an area 4–6' in diameter with:

5 lbs gypsum or Hi-Cal lime
5 lbs colloidal phosphate (short-term calcium and phosphorus)
5 lbs azomite (long-term minerals and trace minerals)
5 lbs granite meal or greensand (for improved soil texture)
2–3 lbs menefee humates (aids mineral and rock-powder breakdown)

For building high levels of humus, also add:

2 lbs alfalfa meal
2 lbs bone char or bone meal
2 lbs kelp meal
2 lbs blood meal
100 lbs compost (1/8 yard)
BioDynamic preps (optional)

Cover with a 3–4" mulch of lawn clippings, leaves or "brush" chips, which will smother the sod, conserve moisture, prevent leaching and provide a habitat for soil organisms to break down the recipe. In the spring, pull back the mulch and dig your tree hole, incorporating the mineral supplements and compost into the backfill.

Simpler Method

Forgo the soil amendments and simply pile 1–2 wheelbarrows of compost on each planting-hole site. If you live by the ocean, add a couple of wheelbarrows of seaweed. Then cover with mulch. In the spring, pull back the mulch and plant your fruit tree, incorporating the compost into the hole as you dig.

Feeding older fruit trees

Cover the surface of the ground out to the drip line with the same materials listed above. For larger trees (five years and older) increase the mineral amount to 10–15 lbs each. For ancient trees you can use up to 25 lbs of each mineral in a ring beneath the drip line. Mulch as described above.

The basics of tree care outlined here are meant to get you going. Obviously, we can't tell you everything you need to know in a few pages. Some specific information, like location or soil preferences of particular plants, is in the item descriptions. A soil test is useful in determining the specific needs of your site. Reading, observation, trial and error, and talking with other growers and with extension agents can expand your knowledge of trees and shrubs.

Consult the Fedco Seeds catalog's book list for recommended reference books, or look for information online, including useful links at our website, **fedcoseeds.com/trees**.

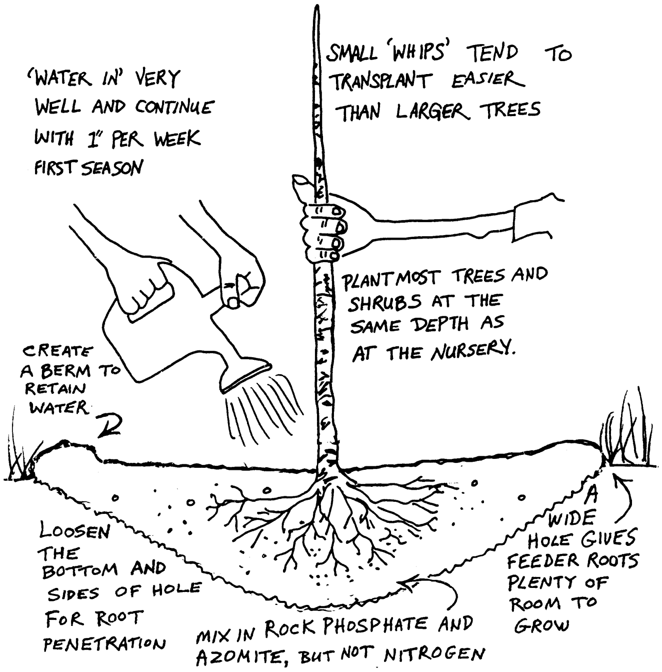
General Planting Directions for Trees and Shrubs

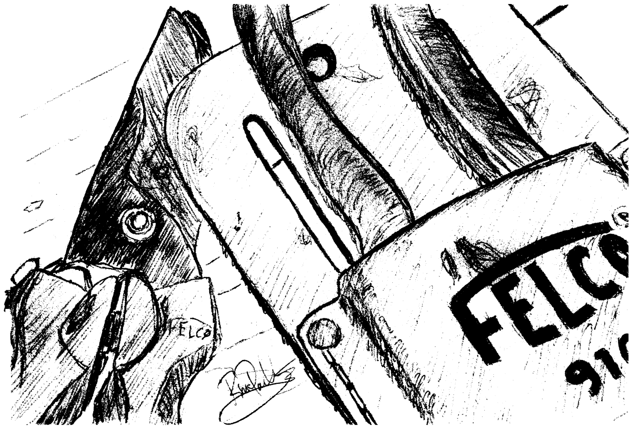
The best way to ensure your plants will thrive is to follow cultural requirements. Choose the right site for the plant. Add soil amendments only as needed. Many native plants don't require any fertilization.

To reduce transplant shock, plant on cool cloudy days in the early morning or late afternoon. Soak deciduous trees and shrubs for up to 24 hours before planting. Keep the roots from drying out; even a few minutes in the sun and breeze can kill a tree or shrub. Keep them in a bucket of water as you plant.

Follow these steps for planting:

1. **Dig a large hole**, at least twice as wide and about as deep as the root system. Most roots grow laterally and need plenty of room to spread out. Your trees will benefit if the hole is at least 3' wide.
2. **Loosen up the soil** at the bottom of the hole and especially around the sides. For fruit trees, if you haven't used a deluxe fall preparation, you may add a 3-lb bag of our planting mix (available from the **Organic Growers Supply** section of the Fedco Seeds catalog), or well-aged compost and mineral fertilizers like rock phosphate or azomite, but not manure or other nitrogen sources. Incorporate into the soil, then make a mound at the bottom of the hole over which to spread the roots.
3. **Examine the plant for a "dirt line"** or a change in bark color indicating nursery depth. (This is different from the graft line.) Generally, you should plant trees and shrubs at the same depth they grew in the nursery. Set the plant in the hole and spread the roots out around the mound. Make sure the roots are not circling in the hole. It's better to trim roots a bit than coil them. Hold the plant at the right depth as you backfill the soil around it. Tamp firmly to remove air pockets.
4. **Water immediately.** Don't skimp on the initial watering; make sure there's plenty to settle in all that loosened soil. Wiggle the trunk as the water seeps in to ensure no air pockets remain around the roots. Leave a berm around each tree so water will not run off. Keep them well watered throughout the first summer. They require the equivalent of 1–2" rain per week. A good soaking is effective; sprinkling is not.
5. If you want to remember which variety you planted, replace the plastic Fedco tag with a permanent tag. See below.


'WATER IN' VERY WELL AND CONTINUE WITH 1" PER WEEK FIRST SEASON
SMALL 'WHIPS' TEND TO TRANSPLANT EASIER THAN LARGER TREES
PLANT MOST TREES AND SHRUBS AT THE SAME DEPTH AS AT THE NURSERY.
CREATE A BERM TO RETAIN WATER
LOOSEN THE BOTTOM AND SIDES OF HOLE FOR ROOT PENETRATION
MIX IN ROCK PHOSPHATE AND AZOMITE, BUT NOT NITROGEN
A WIDE HOLE GIVES FEEDER ROOTS PLENTY OF ROOM TO GROW



Initial Pruning at Planting Time

All Trees and Shrubs

It's okay to prune any branches that were broken during shipping. Sometimes we need to prune a central leader in order to fit a tree into a shipping box; don't worry—a new leader will grow from the topmost bud. Prune all dead or injured branches and roots. Further pruning of most trees is not necessary at planting time. Do not prune tops or prune or bend tap roots of nut or oak trees. Find general information on pruning on p. 43. Conifers (p. 33), roses (p. 46) and lilacs (p. 50) benefit from special pruning especially in later stages of growth.

All Fruit Trees

Avoid pruning young trees except to establish a basic shape, as it delays bearing. It's okay to cut off extra trunks and large branches as needed, but keep in mind that every time you prune potential leaf-bearing branches from a young tree, you set it back. The tree will grow quickly and fruit sooner if you allow it to maximize photosynthesis. Once it begins to fruit, you can prune annually. Always remove suckers or root shoots.

On peaches and plums, the trees may want to develop 2–4 leaders, or an open-vase shape. Always prune just above a good strong bud that faces a direction you'd like your plant to grow. On apple and pear trees, you may choose to either leave the central leader alone and let it grow or cut it back according to the instructions below. Either way is acceptable; it's a matter of personal preference.

Apple Trees

Apple trees will almost always benefit from light intial pruning to establish shape. Then refrain from pruning until the tree begins to fruit.

- **Year one (initial planting time)**: If the tree is a branch-less "whip," you may cut the top back to a strong bud about 3–4' from the ground. This will encourage branching. If the new tree arrives *with* branches, prune off all but 3–4 branches at the height you'd like for your first tier, about 3–4' from the ground, or higher if you prefer. The lowest scaffold (branch layer) should be very wide to collect as much sun as possible. If too low, these long branches will rest on the ground under the weight of fruit, and the deer will have a field day. Also, it becomes difficult to mow, mulch, etc.

  Some folks choose to not prune at the time of planting and wait to shape the tree in subsequent years. This method is fine, too.
- **Year two**: Trim off root suckers or other odd branches that come up from around the base. Otherwise, leave the tree be and let it grow.
- **The next few years**: If something looks really crowded, broken or dead, prune it. Otherwise, leave your tree alone and let it grow. If you don't fuss over it too much, you'll get fruit sooner!

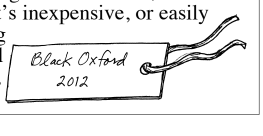
Once your fruit tree begins to bear you will want to prune annually. Good pruning brings sunlight to all parts of your tree. Maximum sunlight encourages more and higher-quality fruit. Sunlight also encourages fruit buds to form for next year's crop. A well-pruned tree will produce larger fruit and will tend toward more annual bearing. Good pruning discourages fungal diseases and promotes greater spray penetration. There's an old saying that a bird should be able to fly through your fruit tree.

Most pruning should be done in late winter or early spring. We recommend a good-quality pair of hand shears and a lightweight pruning saw. You may also wish to invest in long-handled loppers, a pole pruner or a pole saw. Keep your pruning tools sharp for smooth, clean cuts.

Any good book on growing fruit trees will have the information you need. Consult old and new books as well as orcharding articles and develop a system that works for you. Pruning is not difficult and will make a huge difference.

The Perfect Tree Label

Commercially available garden labels do not last. Sharpies® always fade. Aluminium tears off in the wind. And so on. Now, we make our own. We use vinyl siding. Vinyl siding works so well, we should remove it from all the houses in the world and make it all into plant labels. It's inexpensive, or easily salvaged, and you can make dozens from a single piece of siding. Cut siding into strips using a utility knife. Snip strips to length using hand pruners. Drill a hole at one end. Attach with wire. Write information on labels with pencil, NOT a marker. Pencil will last for decades.



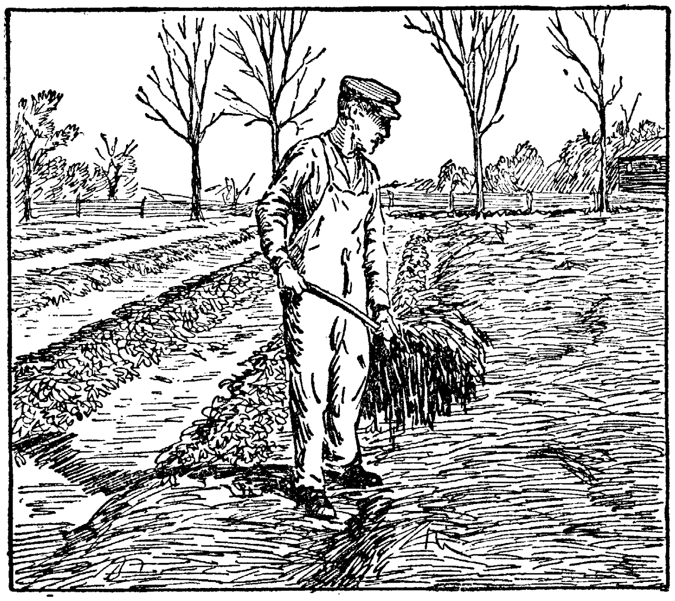
Orchard Ladders

Sturdy lightweight traditionally shaped wooden orchard ladders have wide bottoms for stability and narrow tops for easy handling and placement.

Contact the manufacturer:
Peter Baldwin, (207) 722-3654, baldwin@acadia.net
peterbaldwinarts.com/ladders

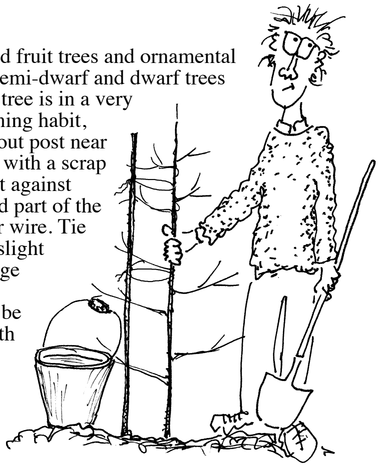
Mulch

Keep weeds and especially grass away from new trees and shrubs. Apply a 2–4" mulch of composted material, leaves, wood chips or hay out as far as the drip line. A 1/2–1" topdressing of alfalfa meal beneath the mulch may substantially reduce transplant shock. Keep mulch back several inches from the tree trunk. We lay down cardboard or newspaper and spread mulch on top of it. Mulch encourages earthworms, holds moisture, keeps down weeds, insulates against excess heat and cold, aerates and loosens soils, builds humus and fertilizes feeder roots, 90% of which are within 6" of the surface.



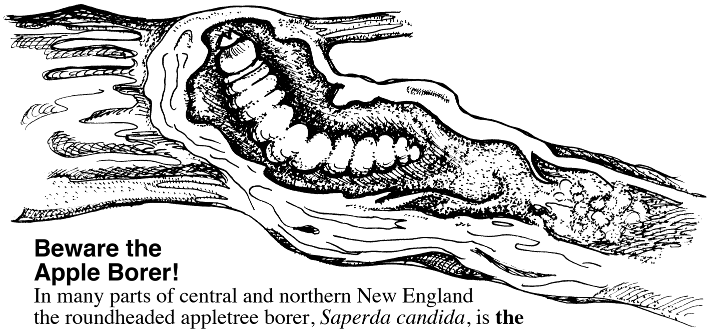
Staking

Newly planted standard-sized fruit trees and ornamental trees seldom need staking. Semi-dwarf and dwarf trees may require staking. If your tree is in a very windy site or develops a leaning habit, staking may help. Drive a stout post near the tree. Wrap the tree trunk with a scrap of burlap or rubber to protect against abrasion. Secure the wrapped part of the tree to the post with string or wire. Tie tree somewhat loosely, as a slight rocking motion will encourage rooting. Once roots are well anchored, the stake may not be needed. Mark small trees with a stake with ribbons to warn operators of lawn mowers, tractors, cars, skidders and skateboards.



Spacing of Fruit Trees, Nut Trees & Berries

	between plants	between rows
Apples, Dwarf	7-8'	15'
Apples, Semi-dwarf	15'	15'
Apples, Standard	25–30'	25–30'
Asparagus	1–2'	4'
Blackberries	3–4'	6–12'
Blueberries, highbush	3–6'	8–10'
Blueberries, lowbush	1'	1'
Grapes	8'	8–10'
Hazel	4-6'	hedge
Kiwis	10'	10'
Nut trees - orchard	35'	35'
Nut trees - forest	20'	20'
Pears, Asian Pears	20'	20'
Raspberries	2'	6–12'
Stone Fruit	15–20'	15–20'
Strawberries	see instructions, p. 27	
Sweet Cherries	25'	25'



Beware the Apple Borer!

In many parts of central and northern New England the roundheaded appletree borer, *Saperda candida*, is **the number one enemy** of young **apple**, **crabapple** and **quince** trees. If you are growing young apple trees in these locations, you *must* protect your trees from this pest. Farther south and north the borer may not be a pest. If you don't know if they are a problem in your area, check with any grower near you: they'll know. Otherwise, err on the side of caution. The borer does not endanger other fruit trees or ornamentals.

Borer beetles lay eggs under the bark near the base of the tree. The developing larvae tunnel through the wood, eventually weakening the tree until it falls over. The trouble sign is small deposits of orange sawdust, called frass, at the base of the tree. Check lower trunks for frass and tunneling in late May, and again in September. Left unchecked, borers usually mean death for young trees.

Cut It Out

Identify the hole or soft spot in the trunk and insert a wire until you locate and kill the larvae. Cut away soft, spongy pockets with a knife. Even serious carving is less harmful to the tree than leaving the larvae alive inside.

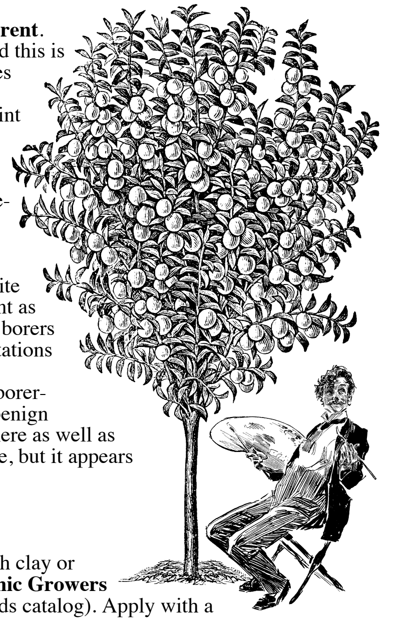
Blasted Borers

When you discover a soft spot or hole in the tree, get yourself a can of compressed air (for cleaning computers). Put the long skinny tube nozzle up to the hole and give it a blast. Should do the trick.

The Polyculture Deterrent

Borer beetles thrive in shady moist warm environments. Keep grass back at least 6" from the tree base. Trials in our "functional" orchard suggest that a mixed polyculture environment may disguise the apple trees and fool the borers. We plant woody and herbaceous perennials around the trees, keeping them back 12" or so. Borers are lazy opportunists. If there are a lot of apple trees within easy reach, they will attack. Otherwise, you may never see them. The polyculture orchard may present too much work for them. So far, we've been able to keep this orchard clear of borers with no painting. (See below.)

Paint the trunks



Painting is likely the best deterrent. I've tried a number of recipes and this is my favorite. It's easy and requires no hard-to-find ingredients. Mix white *interior* latex paint with joint compound. (The stuff you smear on sheet rock joints and nail holes—you can buy a small tub at any hardware store. Some exterior paint formulations contain ingredients that can harm the underlying phloem.) The consistency should be thick but still quite easy to paint, not glob on. Repaint as needed. This mix will help deter borers and also make detection of infestations easier. Look for the frass!

We are experimenting with a borer-prevention formula using more benign ingredients. It doesn't last or adhere as well as the paint-joint compound mixture, but it appears to work fairly well.

2 qt quick lime
4 gal milk
1 gal boiled linseed oil

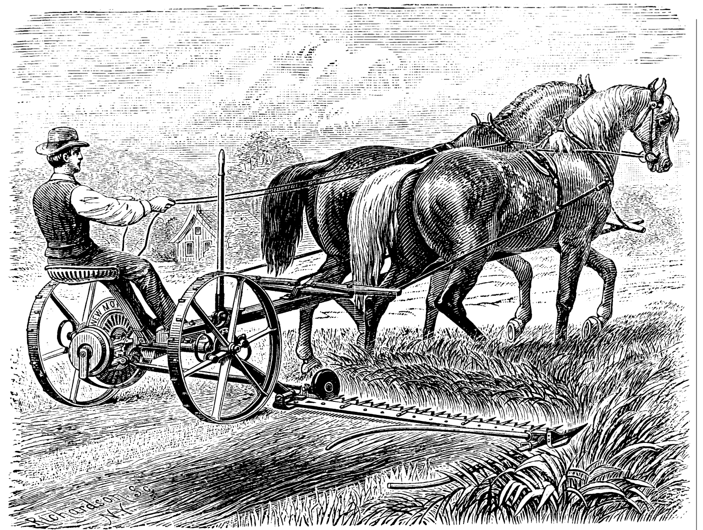
Mix well. Thicken as needed with clay or Surround (available in the **Organic Growers Supply** section of the Fedco Seeds catalog). Apply with a paint brush. Reapply as needed.

Neem Oil

Recent trials indicate neem oil is effective against borers. You can make a 2% neem solution to spray on trucks, especially the first 8–12" above soil line, once a month from June to September. In a bucket, blend 1/3 cup neem oil with 2 tsp biodegradeable dish soap until the color lightens, then mix in a gallon of warm water.

If this seems too involved for your situation, you could also just paint undiluted neem oil, warmed to liquify, onto young tree trunks.

With either method, treat trunks only; neem oil could burn the foliage.



Scab in the apple orchard

Apple scab (*Venturia unaequalis*) is the most challenging disease for the New England apple grower. Scab is a fungus, spread by spores that overwinter in fallen fruit and leaf litter, rising up in rainy spring weather to cause grief all over again. It appears as small rough black patches on the fruit or foliage. A bit of scab is not a bad thing. It won't hurt you or your tree or fruit. Some growers actually believe that a small amount of scab triggers a beneficial self-protection response in the apple. You eat the slightly scabby apple and gain the health benefit yourself. But a lot of scab can destroy the fruit and even kill the tree. Severity of infection can vary depending on the year, the site, and the variety.

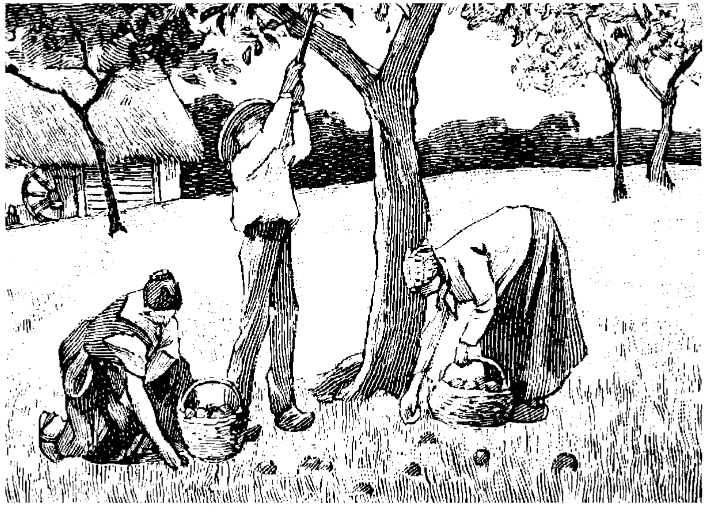
With organic or conventional fungicides as a last resort, what can you do to avoid or minimize scab damage in your trees?

Avoid susceptible varieties. Although nearly all apples are susceptible to some extent, certain varieties are especially vulnerable to scab. In particular, McIntosh and its relatives are scab magnets. These include Cortland, Fameuse and Macoun. If you grow these apples, you'll probably struggle with scab in your orchard. If you can avoid these varieties, you may be able to keep scab to a tolerable level without spraying fungicides. Most heirlooms are susceptible but should be quite tolerant as long as highly susceptible varieties are kept away.

In 1945, Purdue, Rutgers and Illinois universities began a collaboration to develop scab-immune varieties. Many of these have PRI in their names. (Prima, Priscilla, William's Pride, etc.) They bred the varieties using *Malus floribunda* as a parent. It contains a gene that imparts scab immunity to the fruit. By crossing and recrossing, they were able to isolate and include this gene in the final introduction. Fedco Trees has offered of these varieties, including GoldRush from the PRI program, and Liberty from the associated New York breeding program. If you like the fruit from these varieties, growing them can be a good strategy for avoiding scab.

Thin the fruit. In late spring or early summer, we thin all our tree fruit, remove enough fruitlets that the mature fruits won't touch. You want air circulation. Insects also like those places where fruits rub against each other.

Clean up drops and fallen leaves. Scab lives in the drops (fallen fruit), as do insects. Eat the drops, make them into cider, feed them to your livestock or compost them. Some farmers let livestock in the orchard to eat the drops. Also rake up leaves in the fall. Burn, compost or mow them. By practicing good hygiene in the orchard, some growers have been able to grow good McIntosh organically.



Protecting Trees from Mice and Voles

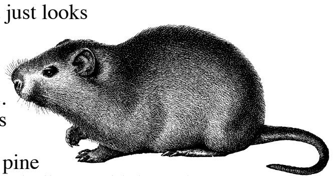
Fruit trees and ornamentals are sometimes girdled by mice or voles eating the bark. Girdling will usually kill the tree or shrub. The danger is greatest in winter. Stomp around the trunks after each fresh snowfall to create a packed-ice barrier that will prevent mice from traveling beneath the snow. Keep the grass mowed in the fall and remove large mulch piles from near the trunks. Rodents like to nest in hay more than in chip mulches. A wrap of window screening or a plastic spiral tree guard will protect your tree from being girdled.

If you use screening or plastic spiral tree guards on apple, quince or crabapple trees, remove them from April to October, as they attract borers if left on the tree in the summer. You can leave plastic spiral tree guards on most other trees year-round.

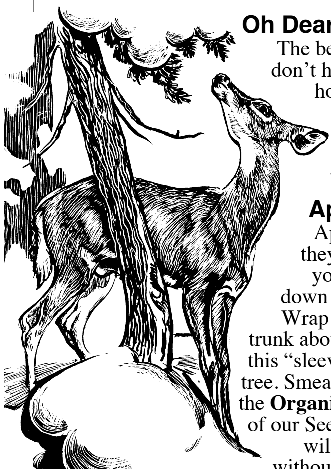
Our trials show that a mulch of wood chips surrounding young trees greatly reduces the chance of summer vole damage. Tall grasses invite them in. The polyculture model may provide cover for the voles and can result in summer vole damage. So keep the tall perennials back about 12" from the tree. Make your orchard hawk friendly.

Voles Don't Like Narcissus!

For many years we've been planting daffodils around the base of some of our apple trees. No particular reason; it just looks great. Come to find out that you can beautify your orchard and deter voles at the same time. Plant daffodils in a circle a foot or two away from the base. The tunneling voles don't like the bulbs and will veer away.



We don't have the super-destructive pine voles in our orchard—whether or not the bulbs would deter them, we don't know. We're continuing our trials in Massachusetts where the pine voles are a big problem.

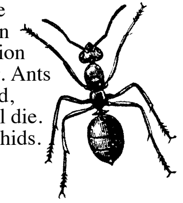


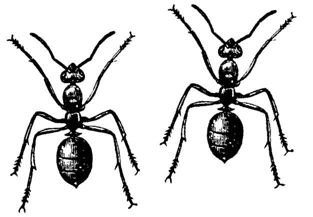
Oh Dear, Deer!

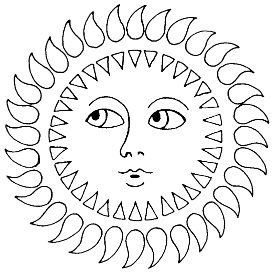
The best deer protection is a collie in the yard. If you don't have a dog or if your orchard is too far from the house, an 8' sheep fence will work. Some people have good luck with electric fences. Small protective fence enclosures can be made by circling your tree with a cylinder of chicken wire or other fencing.

Aphids and ants

Aphids can do a lot of damage to apple trees and they make the young leaves look gross. Whenever you see aphids you will see ants climbing up and down the tree feeding them. Here's an easy solution. Wrap a piece of stiff paper about 6" wide around the trunk about a foot or two off the ground. Tape this "sleeve" to itself but not to the tree. Smear Tanglefoot (available in the **Organic Growers Supply** section of our Seeds catalog) on the paper. Ants will not cross the barrier and, without the ants, the aphids will die. In a day or two no more aphids.







Fedco Goes Solar!

Thank you to our Consumer Members and loyal customers who helped us convert to solar power! Our new panels are generating most of the electricity needed for our three warehouses.

Join the more than 1000 consumer-members who support our cooperative by contributing $100 membership equity, refundable at any time upon request.

If you have any questions about membership, please visit our website, or contact us: questions@fedcoseeds.com or call 207-426-9900.

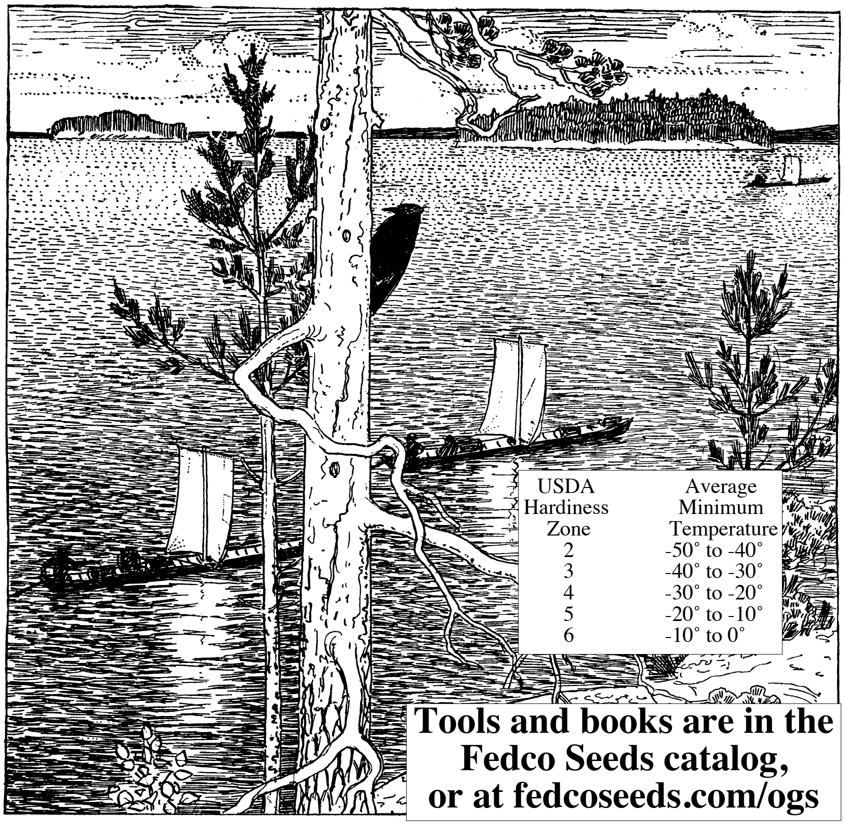
Why Join Fedco as a Member?

- Membership = ownership. Own a piece of Fedco!
- Your membership equity helps finance our new facility, reducing our interest expense.
- Enjoy benefits such as a 1% discount on all your orders.
- Happy with our products, prices and catalogs? Help us to endure and thrive for many years to come! Keep that humor, those bad puns and occasional rants coming!
- Support our politics? Help us fulfill our mission to repopulate the world with plants!

Index

Page

- *Abies* 33
- *Acer* 31
- *Achillea* 55, 63, 64
- *Aconitum* 55
- *Actaea* 64
- *Actinidia* 30
- *Aesculus* 31
- Agri-gel 24, 33
- *Alcea* spp. 55
- *Alchemilla* 63, 64
- *Althaea* 64
- *Amelanchier* spp. 39
- *Amsonia* 55
- Apple 4-16, 44-45
- Apricot 19
- *Aquilegia* spp. 55
- *Arctostaphylos* 51
- *Arisaema* 56
- *Aristolochia* 30
- *Armeria* 56
- *Armoracia* 53
- Arnica 63, 64
- *Aronia* spp. 40
- *Artemisia* 64
- *Asarum* 64
- *Asclepias* spp. 56
- Asian Pear 19
- Asparagus 53
- Aster 62
- *Astilbe* 56
- *Astragalus* 64
- *Baptisia* 57, 63
- Bayberry 45
- Beach Plum 46
- Bearberry 51
- Bee Balm 63, 65
- Bellflower 57
- Berries 24-27
- *Betula* spp. 31
- Birch 31
- Blackberry 25
- Black Cohosh 64
- Black Haw 51
- Black Raspberry 25
- Black Walnut 31
- Blazing Star 60
- Bleeding Heart 57
- Bloodroot 62
- Blueberry 25-26
- Blue Flag 60
- Bluestar 55
- Books 11, 15
- Bulbs 66
- Butterfly Weed 56
- *Calluna* 51
- *Calycanthus* 40
- *Campanula* 57
- Cane Fruits 24-25
- *Caragana* 40
- Cardinal Flower 60
- Carolina Allspice 40
- *Carya* 31
- *Castanea* 31
- Catmint 60
- *Cercis* 40
- Cherry, Cornelian 41
- Cherry, Dwarf Sour 46
- Cherry, Nanking 46
- Cherry, Pie 20
- Cherry, Sweet 20
- Chestnut 31
- Chinese Milk Vetch 64
- Chokeberry 40
- Cider Apple 4-15
- *Claytonia* 57
- Clematis 57
- Collections
  - Cider Apple 7
  - Crabapple 45
  - Grape 29
  - Heritage Apple 7
  - Hybrid Plum 23
  - Lingonberry 52
  - Orchard Companion 63
  - Perry Pear 18
- Columbine 55
- Comfrey 65
- Comfrey, Russian 63
- Coneflower 64
- Conifers 33
- Cornelian Cherry 41
- *Cornus* spp. 41
- *Corylus* 31
- Crabapple 44-45
- Crampbark 51
- Cranberry, American 52
- Cranberry, Highbush 51
- Cranesbill 59
- *Crataegus* 42
- Crocosmia 66
- *Cydonia* 42
- Dahlia 66
- Dawn Redwood 33
- Daylily 59
- Delphinium 57
- *Dicentra* spp. 57
- *Dictamnus* 58
- *Digitalis* spp. 58
- Dogwood 41
- Dutchman's Breeches 57
- Dutchman's Pipe 30
- Echinacea 63, 64
- *Echinops* 58
- Elderberry 49
- Elm 32
- *Eryngium* 58
- *Erythronium* 58
- Evergreens 33
- False Indigo 57, 63
- Feather Flower 56
- Ferns 58
- Filbert 31
- Fir 33
- Forsythia 42
- Foxglove 58
- *Fragaria* spp. 27, 65
- Garden Roots 53
- Gas Plant 58
- *Gaultheria* 52
- Geranium, Wild 59, 63
- Ginger, Wild 64
- Ginkgo 32
- Gladiolus 66
- *Gleditsia* 32
- Globe Thistle 58
- *Glycyrrhiza* 65
- Goldenseal 65
- Grape 28-29
- Groundcovers 51-52, 63
- *Hamamelis* 42
- Hawthorn 42
- Hazelnut 31
- Heather 51
- *Helenium* 59
- *Hemerocallis* 59
- Hens & Chicks 62
- Hibiscus 59
- Hickory 31
- Hollyhock 55
- Honeyberry 43
- Honeylocust 32
- Honeysuckle, Dropmore 30
- Hophornbeam, Eastern 32
- Hops 30
- Horse Chestnut 31
- Horseradish 53
- Hosta 59
- *Humulus* 30
- Hydrangea 42
- *Hydrastis* 65
- Hyssop 63, 65
- *Ilex* 43
- Iris 60
- Ironwood 32
- Jack-in-the-Pulpit 56
- *Juglans* 31
- Juneberry 39
- Kiwi, Hardy 30
- Lady's Mantle 63, 64
- Lavender 65
- *Levisticum* 65
- *Liatris* 60
- Licorice 65
- Lilac 50
- Lily 60
- *Lindera* 43
- Lingonberry 52
- Lobelia 60
- *Lonicera* 30, 43
- Lovage 65
- Lungwort 62
- *Malus* 4-16, 44-45
- Maple 31
- Marshmallow 64
- Medicinal Plants 64-65
- Medlar 45
- *Mespilus* 45
- *Metasequoia* 33
- Milkweed, Red 56
- Mockorange 45
- *Monarda* spp. 63, 65
- Monkshood 55
- *Morus* 45
- Mulberry 45
- Mushrooms 54
- *Myrica* 45
- Nannyberry 50
- *Nepeta* 60
- Nuts 31
- Oak 32
- *Ostrya* 32
- *Papaver* 61
- Pasque Flower 62
- Peach 21
- Pear 17-19
- Peashrub 40
- Peony 61
- Perennial Plants 55-65
- *Perovskia* 61
- Perry Pear 18
- *Philadelphus* 45
- Phlox 61
- *Picea* spp. 33
- Pine 33
- Plum 22-23
- Plum, Beach 46
- *Polygonatum* 61
- Poppy, Oriental 61
- Pruning 43, 68
- *Prunus* 16, 19-23, 46
- Pulmonaria 62
- *Pulsatilla* 62
- Pussy Willow 48
- *Pyrus* 16-19
- *Quercus* spp. 32
- Quince 42
- Raspberry 24-25
- Rattlesnake Master 58
- Redbud 40
- *Rheum* 53
- Rhubarb 53
- *Rhus* 46
- Rootstock 5, 16, 38
- Rose 46-47
- *Rubus* 24-25
- Sage, Russian 61
- *Salix* spp. 32, 48
- *Sambucus* 49
- *Sanguinaria* 62
- Scionwood 16, 37-38
- *Scutellaria* 65
- Sea Thrift 56
- *Sempervivum* 62
- Serviceberry 39
- Shadbush 39
- Shade Trees 31-32
- Skullcap 65
- Sneezeweed 59
- Solomon's Seal 61
- Spicebush 43
- Spiderwort 63
- Spirea 49
- Spring Beauty 57
- Spruce 33
- Stewardship Apple 14
- Stone Fruit 19-23
- Strawberry 27
- Strawberry, Alpine 65
- Sugar Maple 31
- Sumac, Fragrant 46
- Sword Lily 66
- *Symphyotrichum* 62
- *Symphytum* 63, 65
- *Syringa* spp. 50
- Thyme, Creeping 63
- Tiger Lily 60
- *Tradescantia* 63
- Tree Peony 61
- Trillium 63
- Trout Lily 58
- T-shirt 13
- *Ulmus* 32
- *Vaccinium* spp. 25-26, 52
- Valerian 65
- *Viburnum* spp. 50-51
- Vines 28-30
- *Vitis* 28-29
- Walnut, Black 31
- Weigela 51
- Wild Bergamot 63, 65
- Wild Raisin, Northern 50
- Willow 32, 48
- Winterberry 43
- Wintergreen 52
- Witch Hazel 42
- Wormwood 64
- Yarrow 55, 63, 64
- **Order Info 34**
- **Order Forms 35-38**



USDA Hardiness Zone	Average Minimum Temperature
2	-50° to -40°
3	-40° to -30°
4	-30° to -20°
5	-20° to -10°
6	-10° to 0°

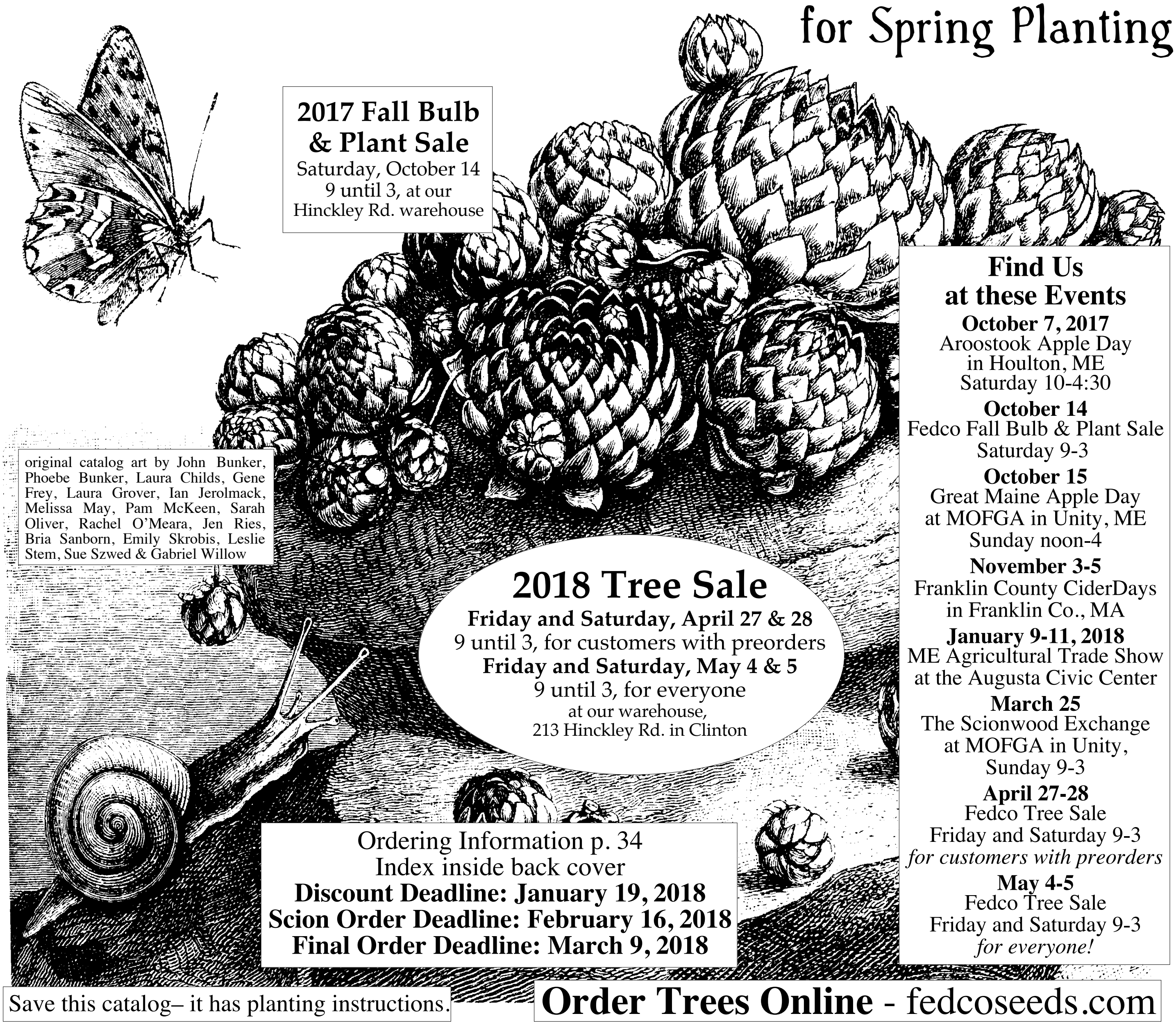
Tools and books are in the Fedco Seeds catalog, or at fedcoseeds.com/ogs

Fedco Trees
PO Box 520
Clinton, ME 04927-0520

Presorted Standard
U.S. Postage
PAID
Fedco Seeds Inc.

change service requested

Trees, Shrubs, Fruits, Berries & Perennials for Spring Planting



2017 Fall Bulb & Plant Sale
Saturday, October 14
9 until 3, at our
Hinckley Rd. warehouse

Find Us at these Events

October 7, 2017
Aroostook Apple Day
in Houlton, ME
Saturday 10-4:30

October 14
Fedco Fall Bulb & Plant Sale
Saturday 9-3

October 15
Great Maine Apple Day
at MOFGA in Unity, ME
Sunday noon-4

November 3-5
Franklin County CiderDays
in Franklin Co., MA

January 9-11, 2018
ME Agricultural Trade Show
at the Augusta Civic Center

March 25
The Scionwood Exchange
at MOFGA in Unity,
Sunday 9-3

April 27-28
Fedco Tree Sale
Friday and Saturday 9-3
for customers with preorders

May 4-5
Fedco Tree Sale
Friday and Saturday 9-3
for everyone!

original catalog art by John Bunker, Phoebe Bunker, Laura Childs, Gene Frey, Laura Grover, Ian Jerolmack, Melissa May, Pam McKeen, Sarah Oliver, Rachel O'Meara, Jen Ries, Bria Sanborn, Emily Skrobis, Leslie Stem, Sue Szwed & Gabriel Willow

2018 Tree Sale

Friday and Saturday, April 27 & 28
9 until 3, for customers with preorders
Friday and Saturday, May 4 & 5
9 until 3, for everyone
at our warehouse,
213 Hinckley Rd. in Clinton

Ordering Information p. 34
Index inside back cover
Discount Deadline: January 19, 2018
Scion Order Deadline: February 16, 2018
Final Order Deadline: March 9, 2018

Save this catalog– it has planting instructions.

Order Trees Online - fedcoseeds.com